2009 ANNUAL POST-REMEDIATION MAINTENANCE AND GROUNDWATER MONITORING REPORT

United Technologies Corporation Pratt & Whitney Division Willow Brook and Willow Brook Pond East Hartford, Connecticut

January 2010

Volume 2 of 3

Prepared for

UNITED TECHNOLOGIES CORPORATION One Financial Plaza Hartford, Connecticut 06101

Prepared by

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An Employee Owned Company

Comm. No. 88UT907.001

Pratt & Whitney 400 Main Street East Hartford, CT 06108



January 21, 2010

State of Connecticut
Department of Environmental Protection
Remediation Division
79 Elm Street
Hartford, CT 06106-5127

Attn: Maurice R. Hamel

RE: United Technologies Corporation

Pratt & Whitney Division

Post Remediation Maintenance and Monitoring

Willow Brook and Willow Brook Pond (SRD-130) and Willow Street North

Dear Mr. Hamel:

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53-a-157b of the Connecticut General Statues and any other applicable law.

Sincerely,

UNITED TECHNOLOGIES CORPORATION PRATT & WHITNEY DIVISION

David Russell

Director, Facilities & Services

Attachment

cc: Gil Richards, DEP

Lauren Levine, UTC Brian Cutler, LEA Juan Perez, EPA



Loureiro Engineering Associates, Inc.

January 21, 2010

State of Connecticut
Department of Environmental Protection
Remediation Division
79 Elm Street
Hartford, CT 06016-5127

Attn: Maurice R. Hamel

RE: United Technologies Corporation

Pratt & Whitney Division

Post Remediation Maintenance and Monitoring

Willow Brook and Willow Brook Pond (SRD-130) and Willow Street North

LEA Comm. No. 88UT907

Dear Mr. Hamel:

In accordance with Paragraph B.1.e of the above referenced Consent Order and Appendix C and D of the document entitled *Remedial Action Work Plan and Request for Variance Engineered Control of Polluted Soils, Willow Street and Willow Street North PCB Remediation Project,* approved by the Department of Environmental Protection on February 10, 2006, attached please find the 2009 Annual Post Remediation Maintenance and Groundwater Monitoring Report for Willow Brook and Willow Brook Pond and Willow Street North. The initial maintenance and monitoring activities were initiated following the August 31, 2002 completion of remediation activities at Willow Brook Pond and were augmented to include those monitoring and maintenance activities associated with the Willow Street North Project following completion on August 11, 2006. In accordance with Paragraph B.8 of the above referenced Consent Order, I hereby certify that:

I have personally examined and am familiar with the information submitted in this document and all attachments thereto, and I certify, based on reasonable investigation, including my inquiry of those individuals responsible for obtaining the information, that the submitted information is true, accurate and complete to the best of my knowledge and belief. I understand that any false statement made in the submitted information is punishable as a criminal offense under §53-a-157b of the Connecticut General Statues and any other applicable law.



If you should have any questions or comments, please contact me or Lauren Levine of United Technologies Corporation at (860) 728-6520.

Sincerely,

LOUREIRO ENGINEERING ASSOCIATES, INC.

Brian A. Cutler, P.E., L.E.P. Senior Vice President

Attachment

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ACRONYMS

CSM Conceptual Site Model

CT ETPH Connecticut Extractable Total Petroleum Hydrocarbons

CWTP Concentrated Waste Treatment Plant

DCE Dichloroethylene

DEP Connecticut Department of Environmental Protection

DQA Data Quality Assessment
DQO Data Quality Objective
DUE Data Usability Evaluation
EDD Electronic Data Deliverable

ELUR Environmental Land Use Restriction

EPA United States Environmental Protection Agency

ERA Environmental Resource Associates
GB PMC GB Pollutant Mobility Criteria

IDEC Industrial/Commercial Direct Exposure Criteria

IMS Information Management System

IVC Industrial/Commercial Volatilization Criteria

LCS Laboratory Control Sample

LEA Loureiro Engineering Associates, Inc.
MS/MSD Matrix Spike / Matrix Spike Duplicate

NOV Notice of Violation

PCBs Polychlorinated Biphenyls

PCE Tetrachloroethylene
PID Photoionization Detector

QA/QC Quality Assurance/Quality Control

RAWP/RFV Remedial Action Work Plan, Request for Variance

RAWP Remedial Action Work Plan

RCRA Resource Conservation and Recovery Act RCSAs Regulations of Connecticut State Agencies

RCP Reasonable Confidence Protocol
RDEC Residential Direct Exposure Criteria

RPD Relative Percent Difference

RSRs Remediation Standard Regulations RVC Residential Volatilization Criteria SOP Standard Operating Procedure SWPC Surface Water Protection Criteria

TCE Trichloroethylene

TSCA Toxic Substances Control Act UTC United Technologies Corporation

VC Volatilization Criteria

VOCs Volatile Organic Compounds



UNITS

milligrams per kilogram milligrams per liter mg/kg mg/l micrograms per liter μg/l %

percent



1. INTRODUCTION

United Technologies Corporation (UTC)/Pratt & Whitney retained Loureiro Engineering Associates, Inc. (LEA) to perform the post-remediation maintenance and groundwater monitoring associated with the remediation of polychlorinated biphenyl (PCB) contaminated soil and sediment within and immediately surrounding Willow Brook, Willow Brook Pond, and Willow Street North (herein after referred to as the "Project Area") at the UTC/Pratt & Whitney manufacturing facility in East Hartford, Connecticut (herein after referred to as the "Site"). The remediation of soil and sediment within and surrounding Willow Brook and Willow Brook Pond was undertaken to satisfy the requirements of Consent Order SRD-130 and was completed on August 31, 2002. The remediation of soil in areas between and below Willow Street and Willow Brook Pond (the Willow Street North Project) was undertaken by UTC/Pratt & Whitney on a voluntary basis in accordance with the document entitled *Remedial Action Work Plan and Request for Variance, Engineered Control of Polluted Soils, Willow Street and Willow Street North PCB Remediation Project* (RAWP/RFV), approved by the Connecticut Department of Environmental Protection (DEP) on February 10, 2006. The Willow Street North Project was completed on August 11, 2006.

The following report has been prepared in accordance with the requirements of paragraph B.1.e of Consent Order SRD-130 and Appendix C and D of the RAWP/RFV. This report presents the 2009 annual summary of post-remediation groundwater and maintenance monitoring conducted to verify the adequacy of the remediation and long-term effectiveness of the engineered control installed at Willow Brook, Willow Brook Pond and Willow Street North.

As detailed in Section 5, no PCBs were detected in any of the groundwater samples collected and analyzed in 2009. The absence of detectable concentrations of PCBs in groundwater indicates that the remediation activities performed to date have been effective in eliminating PCBs as a groundwater contaminant source. Additionally, concentrations for inorganic constituents and volatile organic compounds (VOCs) detected in groundwater are consistent with historic background water quality data from monitoring wells located upgradient of the Project Area.

There are sufficient groundwater data at this time to make a compliance determination relative to the Remediation Standard Regulations (RSRs). However, as required by the regulations, additional rounds of quarterly groundwater monitoring are necessary in order to further substantiate the presence or absence of trends in constituent concentrations at particular monitoring wells. Additional groundwater data will be collected in accordance with the approved RAWP/RFV to further substantiate this assessment.



2. LOCATION AND SITE DESCRIPTION

The UTC/Pratt & Whitney East Hartford manufacturing facility is located at 400 Main Street in East Hartford, Connecticut. A Site Location Map is presented as Figure 2-1. The facility encompasses approximately 769-acres of contiguous land. Pratt & Whitney initiated aircraft engine manufacturing operations in East Hartford in December 1929. Current operations are conducted in an approximate 4 million square foot complex and include administration and management, manufacturing, testing, research and development and ancillary services. All of these activities take place in the western portion of the 769-acre property. The Rentschler Airport and the Klondike Area occupy the eastern portion of the property. UTC/Pratt & Whitney previously used these two areas as an airport and a storage/testing area, respectively.

Willow Brook Pond is located in the northwestern portion of the UTC/Pratt & Whitney East Hartford facility property and is approximately 4 acres in size. Willow Brook is a small stream transecting the UTC/Pratt & Whitney facility from the northern portion of the Rentschler Airport to the northwest portion of the current UTC/Pratt & Whitney operations complex. Willow Brook flows in a southwesterly direction in an open channel from Rentschler Airport, is then hard-piped underground to the inlet of Willow Brook Pond, and continues from the pond as an open channel to a culvert under Main Street. From Main Street, Willow Brook flows in an open channel for a distance of approximately 2,500 feet to the confluence with the Connecticut River. Willow Brook Pond, a single body of water when first created, has been modified various times through the years. It is now comprised of two ponds (Upper Willow Brook Pond and Lower Willow Brook Pond) subdivided by a culvert. The portion of Willow Street which was the subject of the 2006 remediation is adjacent to lower Willow Brook Pond.



3. BACKGROUND

During routine draining of Willow Brook Pond in September 1997, an oil sheen was noticed seeping through the sediment. Pratt & Whitney reported the sheen to the United States Coast Guard and the DEP in accordance with discharge reporting requirements. Following the detection of PCBs in a sediment sample, the DEP issued Pratt & Whitney a Notice of Violation (NOV), No. PCB 97-08, on November 7, 1997. In response to the NOV, during the period from December 1997 to April 1999, UTC/Pratt & Whitney developed a sampling work plan and conducted three phases of investigation. These investigations provided the analytical data to sufficiently define the horizontal and vertical limits of contamination and served as the basis for the development of a remediation plan. During the period from April 1999 to November 2000, UTC/Pratt & Whitney identified and evaluated remedial alternatives to address the PCB-contaminated sediments within and immediately surrounding Willow Brook Pond. The Remedial Action Work Plan (RAWP) was submitted to the DEP and the United States Environmental Protection Agency (EPA) in November of 2000.

During the period from November 2000 to June 2001, numerous permit applications and plans were submitted to regulatory agencies to secure approvals for elements of the remediation project. In addition, during this period of time, the DEP was drafting Consent Order SRD-130 codifying expectations for the remediation of the Site. The Consent Order was signed by UTC/Pratt & Whitney on July 19, 2001 and the DEP on August 1, 2001.

In addition to satisfying the DEP requirements for remediation, UTC/Pratt & Whitney was also involved in a formal voluntary Resource Conservation and Recovery Act (RCRA) Corrective Action Program. On January 19, 2001, the EPA issued a determination that the remediation of contaminated sediments within Willow Brook and Willow Brook Pond was necessary. In order to obtain a decision that the remediation of the Site would be considered a final remedy for the contamination, EPA RCRA Corrective Action staff were involved in the review of the RAWP and were included in all project related correspondence with the various regulatory agencies.

The remediation and restoration activities performed within and immediately surrounding Willow Brook and Willow Brook Pond took place during the period from July 2, 2001 through August 31, 2002. The overall remedial action objective was to physically remove from the site, via excavation and off-site disposal, all soil and sediment containing total PCB concentrations in excess of 25 milligrams per kilogram (mg/kg) and then install a geotextile, soil and rock cap (engineered control) over the entirety of Willow Brook Pond and the open channel of Willow Brook from Willow Brook Pond to Main Street. In addition to satisfying the requirements of the



RSRs, the project was also implemented as part of a final remedy under the RCRA Corrective Action and Toxic Substances Control Act (TSCA) programs. Three areas within the Site were assigned additional remedial objectives. For the wetland and the southern portion of the Lower Willow Brook Pond, the additional remedial action objective was to physically remove all soil and sediment exhibiting contaminants at concentrations greater than the Residential Direct Exposure Criteria (RDEC) for PCBs. For the footprint of the Process Water Facility, inclusive of the small embayment west of the Process Water Facility, the additional remedial action objective was to meet the RDEC for PCBs in soils within 4-feet of the final grade, the Industrial/Commercial Direct Exposure Criteria (IDEC) for PCBs in soils defined as inaccessible by the RSRs, and the GB Pollutant Mobility Criteria (GB PMC) for soils above the seasonal high water table. All remedial action objectives were met during the course of the project.

In 2006, additional remediation of PCB contaminated soil was performed in two separate areas (areas South and East of Upper Willow Brook Pond, and North of the Concentrated Waste Treatment Plant [CWTP] area). The remediation activities were initiated on March 30, 2006 and were completed on August 11, 2006. The overall remedial action objective was to physically remove from the site, via excavation and off-site disposal, all soil and sediment containing total PCBs at concentrations in excess of 25 mg/kg and then install a geotextile and soil cap (engineered control) over the entirety of the project limits. In addition to satisfying the requirements of the RSRs, the project was also implemented as part of a final remedy under the RCRA Corrective Action and TSCA programs. Specific areas of the cap were constructed with a paved roadway surface or crushed rock surface for areas of the cap located below Willow Street or along the embankment of the ponds, respectively. For the areas along the perimeter of the engineered control, the additional remedial action objective was to meet the RDEC for PCBs for soils within 4-feet of the final grade, the IDEC for PCBs in inaccessible soils, and the GB PMC for soils above the seasonal high water table. All remedial action objectives were met during the course of the project.

The remedial action objectives also included the implementation of two institutional controls to ensure the long-term protectiveness of the remedy. The institutional controls consist of 1) an Environmental Land Use Restriction (ELUR) to ensure the affected area will not be used for residential purposes and to prohibit excavation and 2) a fence around the entire project area, exclusive of the roadway, to preclude access to Willow Brook and Willow Brook Pond. The fence around the project area remains in place and a draft ELUR for the entirety of the Willow Brook and Willow Brook Pond Project limits as well as the Willow Street North Project limits was submitted to the DEP on September 22, 2006.



4. GROUNDWATER MONITORING

Groundwater monitoring activities were performed in accordance with subsection (f) of Section 22a-133k-3 of the Regulations of Connecticut State Agencies (RCSAs). The groundwater monitoring plans detailed in Appendix D of the RAWP/RFV for Willow Brook and Willow Brook Pond and Appendix C of the RAWP/RFC for Willow Street North were designed to determine:

- The effectiveness of soil remediation in preventing further pollution of groundwater by substances from the release area;
- The effectiveness of any remediation taken to eliminate or minimize identified health or safety risks associated with such release; and
- Whether applicable surface water protection criteria (SWPC) and volatilization criteria (VC) have been met.

In June 2002, a total of eleven groundwater monitoring wells (WT-MW-40 through WT-MW-50) were installed around the periphery of Willow Brook and Willow Brook Pond. In September 2006, three additional monitoring wells (WT-MW-57 through WT-MW-59) were installed as part of the remediation activities completed in 2006. One new monitoring well (WT-MW-19SR) was installed in April 2008 to replace monitoring well WT-MW-19S. The locations of these monitoring wells are depicted on the Site Plan included as Figure 4-1 of this report.

4.1 Description of Groundwater Monitoring Activities

Groundwater samples were collected on a quarterly basis in 2009 from a total of fifteen groundwater monitoring wells (WT-MW-19SR, WT-MW-40 through WT-MW-50, and WT-MW-57 through WT-MW-59) located within the Project Area. It should be noted that no sample was obtained from monitoring well WT-MW-19SR during the December sampling event because there was not enough groundwater in the well to yield the required sample volume. All groundwater samples were sent under chain of custody control to Accutest Laboratories (Accutest) of Marlborough, Massachusetts and were analyzed for the following parameters: PCBs by Method 8082; VOCs by EPA Method 8260B; Connecticut extractable total petroleum hydrocarbons (CT ETPH) by the DEP approved method; and, unfiltered metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc). In addition, one duplicate sample, trip blank sample, and equipment blank sample was collected and analyzed for



each sampling event. Copies of field paperwork are included as Appendix A and copies of laboratory reports are included in Appendix B of this report.

Groundwater samples were collected on a quarterly basis in 2009 from a total of fifteen groundwater monitoring wells (WT-MW-19SR, WT-MW-40 through WT-MW-50, and WT-MW-57 through WT-MW-59) located within the Project Area. Multiple groundwater samples were collected during the fourth quarter of 2009 from two monitoring wells (WT-MW-19SR and WT-MW-40) that comprise engineered control monitoring well network. The additional samples were collected as part of an ongoing groundwater/surface water interaction study that is being conducted independent of the Willow Brook/Willow Brook Pond Post-Remediation Monitoring Program. The intent of this study is to gain a greater understanding of the effects of standing surface water and potential other hydraulic influences on groundwater flow and contaminant transport in the northwest portion of the Site. Groundwater analytical data obtained from monitoring wells WT-MW-19SR and WT-MW-40 by means of the additional sampling events were incorporated into the Project Area database and evaluated as part of the 2009 Post-Remediation Monitoring Program. Findings of the groundwater/surface water interaction study will be summarized in the 2010 Annual Report.

4.2 Groundwater Elevations

Depth to groundwater was measured in all fifteen monitoring wells on a quarterly basis using an electronic water level indicator. Groundwater levels were measured to the nearest 0.01 foot. Water level measurements were collected by LEA on the following four dates: March 10, 2009; June 4, 2009; September 9, 2009; and, December 8, 2009. Additionally, a surface water measurement of Willow Brook Pond was obtained from the risers of monitoring wells WT-MW-49 and WT-MW-50 and a staff gauge located in Lower Willow Brook Pond. Groundwater-level information was used to evaluate groundwater flow directions and horizontal hydraulic gradients in the upper portion of the unconsolidated aquifer.

Generalized groundwater contour maps from the March, June, September, and December 2009 monitoring events have been included as Figures 4-2 through 4-5, respectively. It should be noted that Willow Brook Pond had been drained for maintenance purposes prior to the December monitoring event. As such, a surface water elevation could not be obtained in December 2009 from the staff gauge in Lower Willow Brook Pond. Further, monitoring well WT-MW-19SR, located in the vicinity of the staff gauge, lacked the volume of water necessary for collection of a groundwater sample.



4.3 Quality Assurance and Quality Control Procedures

During the course of the 2009 post-remediation monitoring, a significant amount of information was obtained for the Project Area. This information included analytical data for groundwater samples; field measurements; sample tracking forms; and other documentation associated with sample collection and analysis. Ensuring that the data generated during the post-remediation monitoring was of sufficient quality to meet the data quality objectives (DQOs) for the project, performance and documentation of quality assurance/quality control (QA/QC) procedures for field and office activities was essential. The following DQOs were developed for the Post-Remediation Groundwater Monitoring Program for the Site:

- Samples collected are of sufficient quality and quantity to assess the groundwater conditions at the Project Area.
- Data obtained are of sufficient quality and quantity to support a regulatory compliance determination.
- Data are sufficient to determine handling and disposal requirements for purged groundwater and decontamination solutions generated during the post-remediation groundwater monitoring activities.

The various types of QA/QC procedures used to ensure that the generated during the investigation was of sufficient quality to meet the DQOs for the project included the collection and/or and analysis of trip blanks, equipment blanks, field duplicate samples, and performance evaluation (PE) samples. A detailed description of the methods employed to collect and analyze these QA/QC samples is provided in Appendix C.

All groundwater samples collected during the 2009 post-remediation groundwater sampling were analyzed using the DEP Reasonable Confidence Protocols (RCPs), which are analytical methods based on the respective EPA or other appropriate methods. The RCPs provide specific requirements for QA/QC that the laboratory must follow during analysis of environmental samples. QA/QC information provided by laboratories using the RCP methods was assessed and evaluated in accordance with the guidelines for performing Data Quality Assessments (DQAs) and Data Usability Evaluations (DUEs). The results from the DUE indicated that the data generated during the 2009 quarterly groundwater sampling events were usable for the intended purpose. A further explanation of the DQA and DUE process and a discussion of the results of the DQA and DUE are provided in Appendix C.



5. GROUNDWATER QUALITY

This section summarizes the results of quarterly groundwater sampling performed at the Project Area during 2009. Specifically, the following subsections summarize the reported concentrations for each constituent and provide a discussion of the results of the QA/QC measures employed for the groundwater sampling conducted at the Project Area.

5.1 Summary of Analytical Data

A total of 67 groundwater samples (including field duplicate samples) were collected during 2009 from Project Area monitoring wells. Four of these samples were collected and analyzed for VOCs to assess short term trends in groundwater quality as part of the ongoing groundwater/surface water interaction study described in Section 4.1. A summary of sampling and analytical information is included as Table 5-1. A summary of constituents detected in 2009 groundwater samples is included as Table 5-2. The following is a summary of the groundwater analytical results for each contaminant of concern.

Polychlorinated Biphenyls: A total of 63 groundwater samples collected during 2009 were analyzed for PCBs. No PCBs were detected.

Volatile Organic Compounds: A total of 67 groundwater samples were analyzed for VOCs during 2009. Of the 67 samples analyzed, 41 contained detectable concentrations of VOCs. The maximum concentration of each compound in micrograms per liter (μg/l) is as follows:

$6.2 \mu g/l$
$5.8 \mu g/l$
$6.5 \mu g/l$
$42.7 \mu g/l$
$42.2~\mu\text{g/l}$
$2.1 \mu g/l$
$51.8 \mu g/l$
195 µg/l
$9.8 \mu g/l$
$2.3 \mu g/l$
$5.8 \mu g/l$
$354 \mu g/l$
$58.9 \mu g/l$



Toluene	2.5 µg/l
1,1,1-Trichloroethane	$12.0 \mu g/l$
Trichloroethylene	$388 \mu g/l$
1,1,2-Trichlorotrifluoroethane	$5.8 \mu g/l$
Vinyl Chloride	96.8 μg/l

Total Petroleum Hydrocarbons: A total of 63 groundwater samples collected during 2009 were analyzed for CT ETPH. Of the 63 samples analyzed, 32 samples contained detectable concentrations. The maximum concentration of CT ETPH was detected in the March 2009 sample from monitoring well WT-MW-59 at a concentration of 1.24 milligrams per liter (mg/l).

Metals: A total of 63 groundwater samples were collected and analyzed for unfiltered metals (arsenic, barium, cadmium, chromium, copper, lead, mercury, nickel, selenium, silver, and zinc) during 2009. Of the 63 samples analyzed, 34 samples contained detectable concentrations of metals. The maximum concentration of each metal is as follows:

Arsenic	0.0116 mg/l
Barium	0.376 mg/l
Cadmium	$0.0708\;mg/l$
Total Chromium	0.0515 mg/l
Copper	$0.0692\;mg/l$
Nickel	1.95 mg/l
Zinc	0.0270 mg/l

5.2 Data Quality Assessment and Data Usability Evaluation

All data were evaluated with respect to quality by conducting a DQA and DUE in accordance with the methodology described in the November 2007 guidance document entitled, *Reasonable Confidence Protocols* and presented in more detail in the May 2009 document entitled *Laboratory Quality Assurance Quality Control, Data Quality Assessment, Data Usability Evaluation Guidance Document*. The DQA was performed to assess the quality of the analytical data in each laboratory analytical report package.

QA/QC issues identified during the DQA process included:

- Reporting of elevated detection limits for VOCs in one groundwater sample;
- Results for Laboratory Control Sample (LCS) for VOCs outside the accepted range of variability;



- Recoveries for Matrix Spike/Matrix Spike Duplicate (MS/MSD) for VOCs outside the accepted range of variability; and
- Recoveries for initial calibration curve and continuing calibration curve outside the accepted range of variability for specific VOC constituents.

The DQA worksheets are provided in Appendix C. The DQA resulted in identifying data for which the quality could affect its potential use in decision-making. After the laboratory analytical data were evaluated during the DQA, a DUE was performed. The DUE took into account the following:

- the site-specific conceptual site model (CSM);
- knowledge of the contaminant types, concentrations, and distribution;
- objectives for the data collection effort and the intended use of the data; and
- results from field QA/QC sampling.

In general, the QA/QC deficiencies identified due not pertain to any of the primary constituents of concern at the Project Area. Taking into consideration multiple lines of evidence, results from the DUE indicated that the data generated during the 2009 quarterly groundwater sampling events were usable for the intended purpose. A more detailed discussion of the DQA and DQE results is included in Appendix C.

5.3 Observed Trends in Groundwater

There are sufficient groundwater data at this time to document contaminant trends at particular monitoring wells, as six years of quarterly groundwater sampling has been performed. Graphs were generated for constituents in each monitoring well using data from March 2005 to present. Graphs were prepared for the following compounds: cis-1,2-dichloroethylene (cis-1,2-DCE), 1,1-dichloroethane, 1,1-dichloroethylene (1,1-DCE), tetrachloroethylene (PCE), trichloroethylene (TCE), vinyl chloride, CT ETPH and arsenic, barium, nickel and zinc in each monitoring well and are included as Appendix D. It should be noted that in the generation of constituent concentration graphs, a value of one half of the reporting limit was established for graphing in each instance where a particular constituent or compound was reported as a non-detect. Data trends for the past five years are discussed by analytical group in the paragraphs below.

Polychlorinated Biphenyls: PCBs have remained at non-detectable levels from March 2004 to present for all groundwater sample locations with the exception of one groundwater sample



collected from monitoring well WT-MW-44 in March 2007. As was described in the 2007 annual report, this sample was re-extracted by Accutest and the initial results were confirmed. However, the result of the analysis was questioned as groundwater in this monitoring well originates offsite from beneath residences along Risley Street. Monitoring well WT-MW-44 in located within an area that was confirmed during remediation of Willow Pond to be void of PCBs in soil. No PCBs were detected in this monitoring well during prior or subsequent groundwater sampling events. To further investigate the PCB detection, an additional co-located sample was collected at monitoring well WT-MW-44 on April 23, 2007 and was submitted concurrently to Accutest and Lancaster Laboratories of Lancaster, Pennsylvania. PCBs were not detected by either laboratory in the co-located sample. PCBs were not detected in subsequent quarterly sampling from this location in 2007, 2008 or 2009. As a result, there is a preponderance of evidence supporting a conclusion that the initial March 2007 data were not indicative of a condition that existed in the aquifer at monitoring WT-MW-44.

Total Petroleum Hydrocarbons: CT ETPH has been consistently detected in a majority of the wells within the Project Area from March 2004 to present in groundwater samples. The highest concentrations of CT ETPH in 2009 were detected in the March groundwater sample from monitoring well WT-MW-59. Based on an evaluation of the concentration graphs from March 2005 to present, no discernable upward or downward trends were observed for CT ETPH.

Volatile Organic Compounds: VOCs have been consistently detected from March 2004 to present in groundwater samples collected from monitoring wells WT-MW-19S/WT-MW-19SR, WT-MW-40, and WT-MW-50. VOCs were consistently detected from September 2006 to present in groundwater samples collected from monitoring well WT-MW-57, WT-MW-58 and WT-MW-59. VOCs are only detected in groundwater samples from monitoring well WT-MW-19S/WT-MW-19SR approximately once per year. However, the average concentrations of TCE, PCE and cis-1,2-DCE reported in monitoring well WT-MW-19S/WT-MW-19SR over the past four years have exhibited an upward trend. The concentrations of TCE and PCE appear to have decreased in WT-MW-40 since an elevated peak of these constituents was reported in March 2008. An overall decrease in concentrations of TCE, PCE and 1,1-DCE was also noted in groundwater samples from monitoring well WT-MW-50. Data from future groundwater sampling events will continue to be evaluated to determine if trends remain consistent and whether new trends emerge.

Metals: One or more metals have been consistently detected from March 2004 to present in groundwater samples collected from monitoring wells WT-MW-19S/WT-MW-19SR, WT-MW-40, WT-MW-48 WT-MW-49 and WT-MW-50. Metals were consistently detected from



September 2006 to present in groundwater samples collected from monitoring wells WT-MW-57, WT-MW-58, and WT-MW-59. Based on an evaluation of the graphs including data from March 2005 to present, metals previously identified in groundwater samples from monitoring well WT-MW-47 (with the exception of chromium in June 2009) and WT-MW-49 were not reported above laboratory detection limits in 2009. Groundwater samples collected from monitoring wells WT-MW-40 and WT-MW-45 previously contained arsenic. Groundwater samples from monitoring well WT-MW-40 also previously contained zinc. Metals were not detected above laboratory detection limits in groundwater samples from either monitoring well in 2009. No additional discernable upward or downward trends were observed for metals.

5.4 Evaluation of Results Relative to the RSRs

In accordance with Appendix D of the RAWP/RFV, the groundwater analytical data have been compared to the default numeric SWPC, Industrial/Commercial Volatilization Criteria (IVC) and Residential Volatilization Criteria (RVC). Also an evaluation relative to the proposed IVC and RVC listed in the *Proposed Revisions – Connecticut's Remediation Standard Regulations - Volatilization Criteria* issued by the DEP in March 2003 was conducted for comparative purposes. Once finalized, the proposed IVC and RVC will apply to groundwater within 30 feet of the ground surface or a building. It should be noted, that historic releases occurring outside the Willow Brook and Willow Brook Pond and Willow Street North site have impacted groundwater quality. As such, the following discussions contain references to historic data as a means to provide an understanding of groundwater quality in the vicinity of Willow Brook and Willow Brook Pond prior to implementation of remediation activities.

5.4.1 Surface Water Protection Criteria

The following metals exceeded the default numeric SWPC in at least one groundwater sample collected during the 2009 quarterly monitoring events: arsenic, cadmium, copper, and nickel. A comparison of 2009 groundwater results to the default numeric SWPC is presented in Table 5-3. Arsenic exceeded the default numeric SWPC of 0.004 mg/l in groundwater samples collected during at least one of the four sampling events from monitoring wells WT-MW-19SR, WT-MW-48, WT-MW-50, and WT-MW-58, at maximum concentrations of 0.0047 mg/l, 0.0116 mg/l, 0.0116 mg/l, and 0.0057 mg/l, respectively. Copper exceeded the default numeric SWPC of 0.048 mg/l in groundwater collected from monitoring well WT-MW-19SR during the June 2009 sampling event at a concentration of 0.0692 mg/l. Cadmium and nickel exceeded the default numeric SWPC of 0.006 mg/l and 0.882 mg/l, respectively, in the groundwater samples collected from monitoring well WT-MW-59 during all four 2009 monitoring events at maximum concentrations of 0.0708 mg/l and 1.95 mg/l, respectively.



PCE was reported at a concentration of 354 μ g/l in the groundwater sample collected from monitoring well WT-MW-19SR during June 2009. This concentration exceeded the default numeric SWPC of 88 μ g/l. No other exceedances of the default numeric SWPC were noted for the 2009 monitoring events.

5.4.2 Volatilization Criteria

Since the existing use of the Site is industrial/commercial in nature, and the future use of the Site will most likely remain industrial/commercial, compliance with the IVC was evaluated for the Site. However, due to the proximity of residential areas to the north and to the west of the Site, compliance with the RVC was also evaluated. It should be noted that based on the site-wide groundwater elevation data, groundwater within the Project Area does not flow toward the buildings to the north of Willow Brook or the residential dwellings located west of the facility.

A summary of the comparisons of the 2009 monitoring well data against the IVC and RVC are presented on Table 5-4 and Table 5-5, respectively. Vinyl chloride exceeded IVC and RVC in groundwater samples collected in 2009 from monitoring wells WT-MW-19SR, WT-MW-40, WT-MW-50, and WT-MW-59 at maximum concentrations of 45.2 μg/l, 96.8 μg/l, 19.8 μg/l, and 32.0 μg/l, respectively. The concentration of 1,1-DCE exceeded the IVC of 6 μg/l and the RVC of 1 μg/l in the groundwater sample collected from monitoring well WT-MW-19SR in June 2009 at a concentration of 9.1 μg/l. The concentrations of 1,1-DCE also exceeded the IVC and RVC in groundwater collected from monitoring well WT-MW-40 during the June, September, October and November monitoring events at a maximum concentration of 28.2 μg/l; and in the groundwater samples collected from monitoring well WT-MW-50 in each of the four quarterly monitoring events at a maximum concentration of 51.8 μg/l. In addition, 1,1-DCE was detected in the groundwater sample from monitoring well WT-MW-40 at a concentration of 4.1 μg/l during the March 2009 sampling event. This concentration exceeded the RVC but is less than the IVC.

The TCE concentration of 388 μ g/l reported in the groundwater sample from monitoring well WT-MW-19SR in June 2009 exceeds the RVC of 219 μ g/l. TCE was detected at a concentration that exceeded the RVC in sample from monitoring well WT-MW-50 during the March and June 2009 monitoring events. The maximum concentration of TCE detected in this well during 2009 was 322 μ g/l.

An evaluation relative to the proposed IVC and RVC listed in the *Proposed Revisions* – *Connecticut's Remediation Standard Regulations* - *Volatilization Criteria* issued by the DEP in



March 2003 was also conducted for comparative purposes. Once finalized, the proposed IVC and RVC will apply to groundwater within 30 feet of the ground surface or a building. It should be noted, however, that the criteria are currently under review by the DEP and therefore may change. As shown in Tables 5-6 and 5-7, exceedances of the proposed RVC and IVC were detected for TCE, PCE and chloroform in a number of groundwater samples.

Historic groundwater analytical data for upgradient monitoring wells located south of Upper and Lower Willow Brook Pond and the stream channel west of Willow Brook Pond have exhibited concentrations of VOCs in excess of the concentrations discussed above. As a result, it has been concluded that the levels of VOCs detected during quarterly monitoring events are not attributable to contamination that was remediated as part of the Willow Brook and Willow Brook Pond and the Willow Street North remediation projects.

5.4.3 Compliance Determination

There are sufficient groundwater data at this time to make a compliance determination relative to the RSRs. However, as required by the regulations, additional rounds of quarterly groundwater monitoring are necessary to further substantiate the presence or absence of constituent trends at particular monitoring wells. The absence of detectable concentrations of PCBs in groundwater indicate that the remediation activities performed to date have been effective in eliminating PCBs as a groundwater contaminant source. Additional groundwater data will be collected in accordance with the DEP approved RAWP/RFV to further substantiate this assessment.



6. ENGINEERED CONTROL MAINTENANCE & MONITORING

The post-remediation maintenance program for the engineered control was developed to ensure that the structural integrity, design permeability, and effectiveness of the engineered control will be maintained. This maintenance program was developed to:

- Periodically inspect the engineered control;
- Identify measures to be taken to prevent run-on and run-off of stormwater from eroding or otherwise damaging the engineered control; and
- Identify measures to be taken to correct the effects of any settling, subsidence, erosion or other damaging events or conditions.

The engineered control and the area surrounding the engineered control were inspected in March and September 2009 in the following areas:

- 1. Signs of erosion.
- 2. Signs of settling.
- 3. Loss of vegetative cover.
- 4. Undesirable growth.
- 5. Signs of ponding and run on.
- 6. Condition of fencing and gates.
- 7. Condition of rip-rap in Willow Brook stream channel.
- 8. Condition of stone layer in Willow Brook.
- 9. Burrowing animals.
- 10. Monitoring well network.

An additional inspection was conducted on July 23, 2009 after a rain event totaling greater than two inches of rain occurred. The Post-Remediation Maintenance Monitoring Forms are included in Appendix E.



6.1 Summary of Maintenance & Monitoring Activities

The following section summarizes the maintenance issues and corrective actions that were implemented with respect to the engineered control during 2009.

- March 2009 inspection At the time of the March 2009 inspection beavers had constructed a dam across Willow Brook, approximately 450 feet downstream of the manmade dam located on the lower pond. During the inspection, it was noted that the top of the southern embankment of Willow Pond located next to the paved parking lot had been eroded. LEA replaced the rip-rap that had been eroded along this embankment on March 30, 2009.
- July 2009 Inspection An area of erosion was observed along the southern bank of Willow Brook, just west of the man-made dam and several smaller areas of erosion were identified along the southern bank of Upper Willow Brook Pond. The timbers comprising the retaining wall on the eastern side of the man-made dam are rotted and the bank behind the wall has been partially washed away. Clusters of trees measuring approximately 0.5 to 2 inches in diameter have taken root above the cap in the rip rap located around the perimeter of Upper Willow Brook Pond and the eastern perimeter of Lower Willow Brook Pond. The beaver dam was still present during the July 2009 inspection.
- September 2009 Inspection No significant changes in the condition of the cap were noted since the inspection that was conducted on July 23, 2009.

6.2 Corrective Action

Pratt & Whitney is in the process of developing and implementing a plan to address each of the maintenance issues identified by LEA. The beavers were removed from the project area in November 2009. Removal of the beaver dam and clearing of trees from the rip-rap is expected to be completed in 2010.



7. CONCLUSIONS

A total of four monitoring events were performed in 2009 in accordance with Appendix D of the DEP approved RAWP/RFV for Willow Brook and Willow Brook Pond and Appendix C of the DEP approved RAWP/RFV for Willow Street North. No PCBs were detected in any of the groundwater samples collected and analyzed in 2009. Other constituents not believed to be related to either the Willow Brook and Willow Brook Pond Project or the Willow Street North Project were detected at levels consistent with background water quality data for the Site. VOCs, CT ETPH and metals were detected in the groundwater samples analyzed during the 2009 quarterly monitoring events. The concentrations of PCE, arsenic, cadmium, copper and nickel, exceeded the default numeric SWPC. Additionally, the current IVC and/or RVC was exceeded in several groundwater samples for vinyl chloride, 1,1-DCE and TCE. These observations are in general consistent with historic data.

There are sufficient groundwater data at this time to determine trends or to make a compliance determination relative to the RSRs. As required by the regulations, additional rounds of quarterly groundwater monitoring are necessary in order to further substantiate the presence or absence of trends in constituent concentrations at particular monitoring wells at the site. The absence of detectable concentrations of PCBs in groundwater indicates that the remediation activities performed to date have been effective in eliminating PCBs as a groundwater contaminant source. Additionally, concentrations for inorganic constituents and VOCs detected in groundwater are consistent with historic data from locations upgradient of Willow Brook and Willow Brook Pond.

Two maintenance monitoring inspections were conducted in 2009 following the March and September quarterly monitoring events, with one additional event performed in July after a significant rainfall. Corrective action has been and will continue to be performed for the items identified. Additional inspections and corrective action measures, if necessary, will continue to be implemented as part of the maintenance and monitoring program.



TABLES



Table 5-1 SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual



Groundwater Monitoring Report

Loureiro Engineering Associates, Inc.

	C C		, carror + + + + + + + + + + + + + + + + + +	Analysis Information Loureiro Engineering Associates, inc								
	Samp	ole Information			1	Analysis I						
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneou Analyses
WT-MW-19SR	1117657	03/11/2009	3.00 - 12.50	GWS		X			X	X	X	
WT-MW-19SR	1123437	06/05/2009	3.00 - 12.50	GWS		X			Х	X	X	
WT-MW-19SR	1130890	09/11/2009	3.00 - 12.50	GWS		X			Х	X	X	
WT-MW-19SR	1134551	10/28/2009	3.00 - 12.50	GWS		X					х	
WT-MW-19SR	1135166	11/23/2009	3.00 - 12.50	GWS		X					х	
WT-MW-40	1117656	03/11/2009	10.00 - 19.00	GWS		X			X	X	X	
WT-MW-40	1123436	06/05/2009	10.00 - 19.00	GWS		X			Х	X	X	
WT-MW-40	1130897	09/11/2009	10.00 - 19.00	GWS		X			Х	X	X	
WT-MW-40	1134565	10/30/2009	10.00 - 19.00	GWS		X					х	
WT-MW-40	1135172	11/23/2009	10.00 - 19.00	GWS		X					х	
WT-MW-40	1136012	12/08/2009	10.00 - 19.00	GWS		X			X	X	X	
WT-MW-41	1117643	03/10/2009	1.00 - 10.00	GWS		X			X	х	X	
WT-MW-41	1123434	06/05/2009	1.00 - 10.00	GWS		X			X	х	X	
WT-MW-41	1130878	09/10/2009	1.00 - 10.00	GWS		X			х	X	х	
WT-MW-41	1136009	12/08/2009	1.00 - 10.00	GWS		X			X	х	Х	
WT-MW-42	1117645	03/10/2009	1.00 - 10.00	GWS		X			Х	X	X	
WT-MW-42	1123435	06/05/2009	1.00 - 10.00	GWS		X			X	х	Х	
WT-MW-42	1130885	09/10/2009	1.00 - 10.00	GWS		X			X	х	Х	
WT-MW-42	1136008	12/08/2009	1.00 - 10.00	GWS		X			х	х	х	
WT-MW-43	1117644	03/10/2009	3.00 - 12.00	GWS		X			X	х	Х	
WT-MW-43	1123440	06/05/2009	3.00 - 12.00	GWS		X			X	х	Х	
WT-MW-43	1130886	09/10/2009	3.00 - 12.00	GWS		X			X	х	Х	
WT-MW-43	1136007	12/08/2009	3.00 - 12.00	GWS		X			X	х	Х	
WT-MW-44	1117646	03/10/2009	5.00 - 14.00	GWS		X			Х	х	х	
WT-MW-44	1123441	06/05/2009	5.00 - 14.00	GWS		X			X	х	Х	
WT-MW-44	1130881	09/10/2009	5.00 - 14.00	GWS		X			X	х	Х	
WT-MW-44	1136011	12/08/2009	5.00 - 14.00	GWS		X			X	х	Х	
WT-MW-45	1117650	03/10/2009	2.50 - 11.50	GWS		X			Х	X	х	
WT-MW-45	1123426	06/04/2009	2.50 - 11.50	GWS		X			X	X	х	
WT-MW-45	1130888	09/10/2009	2.50 - 11.50	GWS		X			X	X	х	
WT-MW-45	1136014	12/08/2009	2.50 - 11.50	GWS		X			X	X	х	
WT-MW-46	1117648	03/10/2009	-1.50 - 7.50	GWS		X			х	х	x	

Legend: x - mass, t - TCLP, s - SPLP, e - EPTOX, z - ZHE, d - Thermal Desorption, r - Charcoal Tube, a - SEM/AVS, m - Methanol, nr - not received; Capitalized - at least one analyte in class detected Printed on 12/28/2009

Table 5-1 SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual



		Gro	oundwater	Monito	oring Rep	ort			L	oureiro Engi	neering As	ssociates, Inc	
Sample Information						Analysis Information							
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses	
WT-MW-46	1123430	06/04/2009	-1.50 - 7.50	GWS		X			x	x	X		
WT-MW-46	1130882	09/10/2009	-1.50 - 7.50	GWS		X			х	x	X		
WT-MW-46	1136019	12/09/2009	-1.50 - 7.50	GWS		X			х	x	X		
WT-MW-47	1117651	03/10/2009	6.00 - 15.00	GWS		X			х	x	X		
WT-MW-47	1123429	06/04/2009	6.00 - 15.00	GWS		X			х	x	X		
WT-MW-47	1130879	09/09/2009	6.00 - 15.00	GWS		X			х	X	X		
WT-MW-47	1136017	12/08/2009	6.00 - 15.00	GWS		X			Х	x	X		
WT-MW-48	1117649	03/10/2009		GWS		X			Х	X	X		
WT-MW-48	1123432	06/04/2009		GWS		X			Х	X	X		
WT-MW-48	1130883	09/10/2009		GWS		X			Х	X	X		
WT-MW-48	1136016	12/08/2009		GWS		X			Х	x	X		
WT-MW-49	1117647	03/10/2009		GWS		X			Х	x	X		
WT-MW-49	1123431	06/04/2009		GWS		X			Х	x	X		
WT-MW-49	1130887	09/10/2009		GWS		X			Х	x	X		
WT-MW-49	1136015	12/08/2009		GWS		X			Х	x	X		
WT-MW-50	1117655	03/11/2009	16.00 - 26.00	GWS		X			Х	X	X		
WT-MW-50	1117661	03/11/2009	16.00 - 26.00	GWS		X			х	X	X		
WT-MW-50	1123438	06/05/2009	16.00 - 26.00	GWS		X			x	X	X		
WT-MW-50	1123439	06/05/2009	16.00 - 26.00	GWS		X			x	X	X		
WT-MW-50	1130895	09/11/2009	16.00 - 26.00	GWS		X			Х	X	X		
WT-MW-50	1130896	09/11/2009	16.00 - 26.00	GWS		X			x	X	X		
WT-MW-50	1136013	12/08/2009	16.00 - 26.00	GWS		X			Х	X	X		
WT-MW-50	1136028	12/08/2009	16.00 - 26.00	GWS		X			х	X	X		
WT-MW-57	1117652	03/11/2009	8.00 - 18.00	GWS		X			х	X	X		
WT-MW-57	1123433	06/04/2009	8.00 - 18.00	GWS		X			х	х	X		
WT-MW-57	1130880	09/09/2009	8.00 - 18.00	GWS		X			Х	X	X		
WT-MW-57	1136010	12/08/2009	8.00 - 18.00	GWS		X			х	х	X		
WT-MW-58	1117653	03/11/2009	8.00 - 18.00	GWS		X			х	X	X		
WT-MW-58	1123428	06/04/2009	8.00 - 18.00	GWS		X			х	х	X		
WT-MW-58	1130892	09/11/2009	8.00 - 18.00	GWS		X			х	X	X		
WT-MW-58	1136020	12/09/2009	8.00 - 18.00	GWS		X			х	х	X		
WT-MW-59	1117654	03/11/2009	8.00 - 18.00	GWS		X			х	X	X		

Legend: x - mass, t - TCLP, s - SPLP, e - EPTOX, z - ZHE, d - Thermal Desorption, r - Charcoal Tube, a - SEM/AVS, m - Methanol, nr - not received; Capitalized - at least one analyte in class detected Printed on 12/28/2009

Table 5-1 SUMMARY OF SAMPLING AND ANALYTICAL INFORMATION



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		le Information	Junu water	MIOIII	Loureiro Engineering Associates, Inc.							
		Analysis Information										
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses
WT-MW-59	1123427	06/05/2009	8.00 - 18.00	GWS		X			X	X	X	
WT-MW-59	1130891	09/11/2009	8.00 - 18.00	GWS		X			х	X	X	
WT-MW-59	1136021	12/09/2009	8.00 - 18.00	GWS		X			х	X	X	

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	0 - 0 0					Loarc	il o Engineening	ASSOCIATES, II IC.
	Location ID	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR
	Sample ID	1117657	1117657	1123437	1123437	1130890	1130890	1135166
	Sample Date	03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	11/23/2009
	Sample Time	14:10	14:10	14:20	14:20	10:25	10:25	10:00
	Sample Depth	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M81204-5	M81204-6	M83394-5	M83394-6	M85761-3	M85761-4	M87560-4
Constituent	Units							
Date Metals Analyzed	-		03/13/2009		06/11/2009		09/16/2009	
Date Organics Analyzed	-			06/12/2009		09/18/2009		12/04/2009
Date Physical Analyzed	-	03/17/2009		06/18/2009		09/23/2009		
Arsenic	mg/L							
Arsenic (unfiltered)	mg/L				0.0042		0.0047	
Barium (unfiltered)	mg/L							
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L							
Copper (unfiltered)	mg/L				0.0692			
Nickel (unfiltered)	mg/L				0.365			
Zinc (unfiltered)	mg/L		0.0221					
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.131		0.452		0.126		
Benzene	ug/L			6.2				
1,1,1-Trichloroethane	ug/L			6.2				
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L			17.2				
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
Methyl tert-Butyl ether	ug/L							
1,1-Dichloroethylene	ug/L			9.1				
trans-1,2-Dichloroethylene	ug/L							
cis-1,2-Dichloroethylene	ug/L			141		1.0		2.5
Vinyl Chloride	ug/L			45.2				
Tetrachloroethylene	ug/L			354				29.9
Trichloroethylene	ug/L			388				34.1
Tetrahydrofuran	ug/L							
Chloromethane	ug/L							
Methylene Chloride	ug/L			5.8				

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	Groundwai	Loureiro Engineering Associates, Inc.						
			WT-MW-19SR	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR		WT-MW-19SR
	Sample ID	1117657	1117657	1123437	1123437	1130890	1130890	1135166
		03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	11/23/2009
	Sample Time	14:10	14:10	14:20	14:20	10:25	10:25	10:00
	Sample Depth	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
		M81204-5	M81204-6	M83394-5	M83394-6	M85761-3	M85761-4	M87560-4
Constituent	Units							
Chloroform	ug/L			42.7				
Toluene	ug/L							
<u> </u>								

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		ing Report		Loureiro Engineering Associates, Inc.				
Location ID	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	
Sample ID	1117656	1117656	1123436	1123436	1130897	1130897	1134565	
Sample Date	03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	10/30/2009	
Sample Time	12:30	12:30	12:15	12:15	13:21	13:21	10:20	
Sample Depth	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	
Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
Lab. Number	M81204-3	M81204-4	M83394-3	M83394-4	M85761-5	M85761-6	M86954-1	
Units								
-		03/13/2009		06/11/2009		09/16/2009		
-	03/18/2009		06/12/2009		09/18/2009		11/12/2009	
-	03/17/2009		06/18/2009		09/23/2009			
mg/L								
mg/L								
mg/L		0.302		0.333		0.344		
mg/L								
mg/L								
mg/L								
mg/L								
mg/L								
mg/L	0.0881		0.134		0.118			
ug/L								
ug/L	1.2						1.4	
ug/L								
ug/L	24.2		32.2		31.4		42.2	
ug/L					1.3			
ug/L								
ug/L								
ug/L	4.6		7.3		22.0		28.2	
ug/L	1.5		3.3		6.3		9.8	
ug/L	25.3		62.0		99.4		195	
ug/L	30.5		81.1		75.7		90.6	
ug/L								
ug/L	2.3				10.7		14.0	
ug/L								
ug/L								
ug/L								
	Sample ID Sample Date Sample Time Sample Depth Laboratory Lab. Number Units mg/L mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Sample ID	Sample ID	Sample ID 1117656 1123436 Sample Date 03/11/2009 03/11/2009 06/05/2009 Sample Time 12:30 12:30 12:15 Sample Depth 10.00' - 19.0 10.00' - 19.0 10.00' - 19.0 Laboratory ACTM ACTM ACTM Lab. Number M81204-3 M81204-4 M83394-3 Units - 03/13/2009 06/12/2009 - 03/18/2009 06/12/2009 - 03/17/2009 06/18/2009 mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L 0.302 mg/L mg/L 0.0302 mg/L mg/L 0.134 mg/L mg/L 0.134 ug/L ug/L 0.134 ug/L ug/L 0.134 ug/L ug/L 0.134 ug/L 1.5 3.3 ug/L 25.3 62.0 ug/L 1.5 3.3 ug/L 1.5 0.5 ug/L 0	Sample ID 1117656 1123436 1123436 Sample Date 03/11/2009 03/11/2009 06/05/2009 06/05/2009 Sample Time 12:30 12:30 12:15 12:15 Sample Depth 10.00′ - 19.0 10.00′ - 19.0 10.00′ - 19.0 10.00′ - 19.0 Laboratory ACTM ACTM ACTM ACTM Lab. Number M81204-3 M81204-4 M83394-3 M83394-3 Units - 03/13/2009 06/12/2009 - 03/18/2009 06/18/2009 06/18/2009 - 03/17/2009 06/18/2009 06/18/2009 mg/L mg/L 0.302 0.333 mg/L mg/L 0.302 0.333 mg/L mg/L 0.0881 0.134 ug/L ug/L 0.0881 0.134 ug/L ug/L ug/L ug/L 1.5 3.3 ug/L 30.5 81.1 ug/L ug/L 2.3 ug/L </td <td>Sample ID 1117656 1117656 1123436 1123436 1130897 Sample Date 03/11/2009 03/11/2009 06/05/2009 06/05/2009 09/11/2009 Sample Time 12:30 12:15 12:15 13:21 Sample Depth 10:00' - 19:0 10:00' - 19:0 10:00' - 19:0 10:00' - 19:0 Laboratory ACTM ACTM ACTM ACTM ACTM ACTM Lab. Number M81204-3 M81204-4 M83394-3 M83394-4 M85761-5 Units - 03/18/2009 06/12/2009 06/11/2009 09/18/2009 - 03/18/2009 06/18/2009 09/18/2009 09/23/2009 mg/L mg/L 0.302 0.333 0.333 mg/L mg/L 0.302 0.333 0.333 mg/L mg/L 0.0881 0.134 0.118 ug/L ug/L 0.242 32.2 31.4 ug/L ug/L 3.3 6.3 ug/L 2.3</td> <td>Sample ID 1117656 1117656 1123436 1123436 1130897 1130897 Sample Date 03/11/2009 03/11/2009 06/05/2009 06/05/2009 09/11/2009 09/11/2009 Sample Time 12:30 12:30 12:15 12:15 13:21</td>	Sample ID 1117656 1117656 1123436 1123436 1130897 Sample Date 03/11/2009 03/11/2009 06/05/2009 06/05/2009 09/11/2009 Sample Time 12:30 12:15 12:15 13:21 Sample Depth 10:00' - 19:0 10:00' - 19:0 10:00' - 19:0 10:00' - 19:0 Laboratory ACTM ACTM ACTM ACTM ACTM ACTM Lab. Number M81204-3 M81204-4 M83394-3 M83394-4 M85761-5 Units - 03/18/2009 06/12/2009 06/11/2009 09/18/2009 - 03/18/2009 06/18/2009 09/18/2009 09/23/2009 mg/L mg/L 0.302 0.333 0.333 mg/L mg/L 0.302 0.333 0.333 mg/L mg/L 0.0881 0.134 0.118 ug/L ug/L 0.242 32.2 31.4 ug/L ug/L 3.3 6.3 ug/L 2.3	Sample ID 1117656 1117656 1123436 1123436 1130897 1130897 Sample Date 03/11/2009 03/11/2009 06/05/2009 06/05/2009 09/11/2009 09/11/2009 Sample Time 12:30 12:30 12:15 12:15 13:21	

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	Groundwai	Loureiro Engineering Associates, Inc.						
	Location ID	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40
	Sample ID	1117656	1117656	1123436	1123436	1130897	1130897	1134565
	Sample Date	03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	10/30/2009
	Sample Time	12:30	12:30	12:15	12:15	13:21	13:21	10:20
	Sample Depth	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M81204-3	M81204-4	M83394-3	M83394-4	M85761-5	M85761-6	M86954-1
Constituent	Units							
Chloroform	ug/L							
Toluene	ug/L							
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		ter Monitor	mig Keport	Loureiro Engineering Associates, Inc.				
	Location ID	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-41	WT-MW-41	WT-MW-41	WT-MW-42
	Sample ID	1135172	1136012	1136012	1117643	1123434	1130878	1117645
	Sample Date	11/23/2009	12/08/2009	12/08/2009	03/10/2009	06/05/2009	09/10/2009	03/10/2009
	Sample Time	13:40	13:10	13:10	14:45	11:05	09:30	12:45
	Sample Depth	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	1.00' - 10.00	1.00' - 10.00	1.00' - 10.00	1.00' - 10.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M87560-17	M87915-10	M87915-9	M81183-2	M83394-8	M85739-1	M81183-6
Constituent	Units							
Date Metals Analyzed	-		12/14/2009		03/12/2009	06/11/2009		03/12/2009
Date Organics Analyzed	-	12/05/2009		12/15/2009			09/16/2009	
Date Physical Analyzed	-			12/19/2009			09/17/2009	
Arsenic	mg/L							
Arsenic (unfiltered)	mg/L							
Barium (unfiltered)	mg/L		0.271			0.234		
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L				0.0258			0.0203
Total Petroleum Hydrocarbons (CT ETPH)	mg/L			0.120			0.106	
Benzene	ug/L						2.1	
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L	40.2		23.4				
1,2-Dichloroethane	ug/L	1.7		1.5				
Chloroethane	ug/L							
Methyl tert-Butyl ether	ug/L							
1,1-Dichloroethylene	ug/L	14.3		4.1				
trans-1,2-Dichloroethylene	ug/L	6.4		4.1				
cis-1,2-Dichloroethylene	ug/L	140		60.3				
Vinyl Chloride	ug/L	96.8		60.5				
Tetrachloroethylene	ug/L							
Trichloroethylene	ug/L	2.1						
Tetrahydrofuran	ug/L							
Chloromethane	ug/L							
Methylene Chloride	ug/L							

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	Groundwater Monitoring Report						Loureiro Engineering Associates, Inc.			
		WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-41	WT-MW-41	WT-MW-41	WT-MW-42		
	Sample ID	1135172	1136012	1136012	1117643	1123434	1130878	1117645		
	Sample Date	11/23/2009	12/08/2009	12/08/2009	03/10/2009	06/05/2009	09/10/2009	03/10/2009		
	Sample Time	13:40	13:10	13:10	14:45	11:05	09:30	12:45		
	Sample Depth	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	1.00' - 10.00	1.00' - 10.00	1.00' - 10.00	1.00' - 10.00		
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM		
	Lab. Number	M87560-17	M87915-10	M87915-9	M81183-2	M83394-8	M85739-1	M81183-6		
Constituent	Units									
Chloroform	ug/L									
Toluene	ug/L									
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	Groundwa	Loui	Loureiro Engineering Associates, Inc.					
	Location ID	WT-MW-42	WT-MW-43	WT-MW-43	WT-MW-44	WT-MW-45	WT-MW-45	WT-MW-45
	Sample ID	1123435	1123440	1130886	1136011	1117650	1123426	1130888
	Sample Date	06/05/2009	06/05/2009	09/10/2009	12/08/2009	03/10/2009	06/04/2009	09/10/2009
	Sample Time	13:10	13:00	10:56	11:00	12:35	12:50	15:14
	Sample Depth	1.00' - 10.00	3.00' - 12.00	3.00' - 12.00	5.00' - 14.00	2.50' - 11.50	2.50' - 11.50	2.50' - 11.50
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M83394-9	M83394-20	M85739-11	M87915-7	M81183-9	M83376-12	M85739-15
Constituent	Units							
Date Metals Analyzed	-							
Date Organics Analyzed	-	06/12/2009	06/12/2009	09/16/2009	12/15/2009	03/19/2009		
Date Physical Analyzed	-					03/17/2009	06/17/2009	09/17/2009
Arsenic	mg/L							
Arsenic (unfiltered)	mg/L							
Barium (unfiltered)	mg/L							
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L							
Total Petroleum Hydrocarbons (CT ETPH)	mg/L					0.824	0.570	0.548
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L							
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
Methyl tert-Butyl ether	ug/L							
1,1-Dichloroethylene	ug/L							
trans-1,2-Dichloroethylene	ug/L							
cis-1,2-Dichloroethylene	ug/L			1.7				
Vinyl Chloride	ug/L					1.1		
Tetrachloroethylene	ug/L							
Trichloroethylene	ug/L							
Tetrahydrofuran	ug/L							
Chloromethane	ug/L	6.5	6.4					
Methylene Chloride	ug/L							

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		ter Monitori				Loure	iro Engineering	Associates, Inc.
	Location ID	WT-MW-42	WT-MW-43	WT-MW-43	WT-MW-44	WT-MW-45	WT-MW-45	WT-MW-45
	Sample ID	1123435	1123440	1130886	1136011	1117650	1123426	1130888
	Sample Date	06/05/2009	06/05/2009	09/10/2009	12/08/2009	03/10/2009	06/04/2009	09/10/2009
	Sample Time	13:10	13:00	10:56	11:00	12:35	12:50	15:14
	Sample Depth	1.00' - 10.00	3.00' - 12.00	3.00' - 12.00	5.00' - 14.00	2.50' - 11.50	2.50' - 11.50	2.50' - 11.50
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M83394-9	M83394-20	M85739-11	M87915-7	M81183-9	M83376-12	M85739-15
Constituent	Units							
Chloroform	ug/L				1.5			
Toluene	ug/L							

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	Groundwater Monitoring Report Loureiro Engineering A							
	Location ID	WT-MW-45	WT-MW-46	WT-MW-46	WT-MW-46	WT-MW-47	WT-MW-47	WT-MW-48
	Sample ID	1136014	1117648	1123430	1130882	1123429	1130879	1117649
	Sample Date	12/08/2009	03/10/2009	06/04/2009	09/10/2009	06/04/2009	09/09/2009	03/10/2009
	Sample Time	15:20	14:25	12:30	13:05	10:35	13:19	10:35
	Sample Depth	2.50' - 11.50	-1.50' - 7.50	-1.50' - 7.50	-1.50' - 7.50	6.00' - 15.00	6.00' - 15.00	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M87915-5	M81183-20	M83376-8	M85739-5	M83376-7	M85689-3	M81183-7
Constituent	Units							
Date Metals Analyzed	-					06/11/2009		
Date Organics Analyzed	-		03/20/2009	06/09/2009	09/16/2009			03/19/2009
Date Physical Analyzed	-	12/19/2009					09/17/2009	03/17/2009
Arsenic	mg/L							
Arsenic (unfiltered)	mg/L							
Barium (unfiltered)	mg/L							
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L					0.0515		
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L							
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.296					0.107	0.226
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L							
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
Methyl tert-Butyl ether	ug/L							2.3
1,1-Dichloroethylene	ug/L							
trans-1,2-Dichloroethylene	ug/L							
cis-1,2-Dichloroethylene	ug/L							
Vinyl Chloride	ug/L							
Tetrachloroethylene	ug/L							
Trichloroethylene	ug/L							
Tetrahydrofuran	ug/L							
Chloromethane	ug/L							
Methylene Chloride	ug/L							

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	Groundwat					Lour	eiro Engineerin	g Associates, Inc.
	Location ID	WT-MW-45	WT-MW-46	WT-MW-46	WT-MW-46	WT-MW-47	WT-MW-47	WT-MW-48
	Sample ID	1136014	1117648	1123430	1130882	1123429	1130879	1117649
	Sample Date	12/08/2009	03/10/2009	06/04/2009	09/10/2009	06/04/2009	09/09/2009	03/10/2009
	Sample Time	15:20	14:25	12:30	13:05	10:35	13:19	10:35
	Sample Depth	2.50' - 11.50	-1.50' - 7.50	-1.50' - 7.50	-1.50' - 7.50	6.00' - 15.00	6.00' - 15.00	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M87915-5	M81183-20	M83376-8	M85739-5	M83376-7	M85689-3	M81183-7
Constituent	Units							
Chloroform	ug/L		3.5	5.7	1.9			
Toluene	ug/L							
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	Groundwa	ter Monito	ring Keport			Lour	reiro Engineering	g Associates, Ind
	Location ID	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48
	Sample ID	1117649	1123432	1123432	1123432	1130883	1130883	1136016
	Sample Date	03/10/2009	06/04/2009	06/04/2009	06/04/2009	09/10/2009	09/10/2009	12/08/2009
	Sample Time	10:35	12:00	12:00	12:00	14:45	14:45	15:05
	Sample Depth							
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M81183-8	M83376-1	M83376-1R	M83376-2	M85739-7	M85739-8	M87915-23
Constituent	Units							
Date Metals Analyzed	-	03/12/2009		06/25/2009	06/11/2009		09/16/2009	12/14/2009
Date Organics Analyzed	-		06/09/2009			09/16/2009		
Date Physical Analyzed	-		06/17/2009			09/17/2009		
Arsenic	mg/L			0.0089				
Arsenic (unfiltered)	mg/L	0.0047			0.0108		0.0116	0.0101
Barium (unfiltered)	mg/L							
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L	0.0107						
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L							
Zinc (unfiltered)	mg/L							
Total Petroleum Hydrocarbons (CT ETPH)	mg/L		0.132			0.222		
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L							
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
Methyl tert-Butyl ether	ug/L		1.5			1.2		
1,1-Dichloroethylene	ug/L							
trans-1,2-Dichloroethylene	ug/L							
cis-1,2-Dichloroethylene	ug/L							
Vinyl Chloride	ug/L							
Tetrachloroethylene	ug/L							
Trichloroethylene	ug/L							
Tetrahydrofuran	ug/L							
Chloromethane	ug/L							
Methylene Chloride	ug/L							

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	Groundwai					Loui	reiro Engineerin	g Associates, Inc
	Location ID	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48
	Sample ID	1117649	1123432	1123432	1123432	1130883	1130883	1136016
	Sample Date	03/10/2009	06/04/2009	06/04/2009	06/04/2009	09/10/2009	09/10/2009	12/08/2009
	Sample Time	10:35	12:00	12:00	12:00	14:45	14:45	15:05
	Sample Depth							
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M81183-8	M83376-1	M83376-1R	M83376-2	M85739-7	M85739-8	M87915-23
Constituent	Units							
Chloroform	ug/L							
Toluene	ug/L							
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Groundwa	ter mionitor	mg Keport			Lour	eiro Engineerin	g Associates, Inc
Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
Sample ID	1117655	1117655	1117661	1117661	1123438	1123438	1123439
Sample Date	03/11/2009	03/11/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009	06/05/2009
Sample Time	10:05	10:05	10:05	10:05	10:25	10:25	10:25
Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
Lab. Number	M81204-1	M81204-2	M81204-7	M81204-8	M83394-16	M83394-17	M83394-18
Units							
-		03/13/2009		03/13/2009		06/11/2009	
-	03/18/2009		03/18/2009		06/12/2009		06/12/2009
-	03/17/2009		03/17/2009		06/18/2009		06/18/2009
mg/L							
mg/L		0.0095		0.0076		0.0114	
mg/L		0.289		0.291		0.304	
mg/L							
mg/L							
mg/L							
mg/L		0.0481		0.0485		0.0484	
mg/L		0.0270		0.0250			
mg/L	0.198		0.175		0.290		0.286
ug/L					0.56		0.50
ug/L	2.4		2.5		4.3		4.4
ug/L							
ug/L	3.6		3.7		5.0		5.4
ug/L	2.0						
ug/L							
ug/L							
ug/L	35.1		36.3		49.0		51.8
ug/L	1.0		1.1				
ug/L	39.7		40.0		59.7		63.2
ug/L	14.7		15.3		18.4		19.1
ug/L	33.2		32.6		37.3		40.9
ug/L	305		306		296		322
ug/L	16.5		16.9		24.1		24.3
ug/L							
ug/L							
	Location ID Sample ID Sample Date Sample Depth Laboratory Lab. Number Units mg/L mg/L mg/L mg/L mg/L mg/L ug/L ug/L ug/L ug/L ug/L ug/L ug/L u	Location ID WT-MW-50 Sample ID 1117655 Sample Date 03/11/2009 Sample Time 10:05 Sample Depth 16.00' - 26.0 Laboratory ACTM Lab. Number M81204-1 Units -	Sample ID	Location ID WT-MW-50 WT-MW-50 WT-MW-50 Sample ID 1117655 1117655 1117661 Sample Date 03/11/2009 03/11/2009 03/11/2009 03/11/2009 Sample Time 10:05 10:05 10:05 10:05 Sample Depth 16:00' - 26:00' - 26:0 16:00' - 26:00' - 26:0 16:00' - 26:00' - 26:0 16:00' - 26:00' - 26:0 16:00' - 26:00' -	Location ID WT-MW-50 WT-MW-50 WT-MW-50 Sample ID 1117655 1117655 1117661 1117661 1117661 Sample Date 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 10:05	Location ID WT-MW-50 WT-MW-50 WT-MW-50 WT-MW-50 Sample ID 1117655 1117655 1117661 1117661 1123438 Sample Date 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 03/11/2009 06/05/2009 Sample Time 10:05	Location ID WT-MW-50 WT-MW-50 WT-MW-50 WT-MW-50 Sample ID I117655 I117655 I117661 I117661 I117661 I123438 I123

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	Groundwat					Lour	eiro Engineerin	g Associates, Inc.
		WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1117655	1117655	1117661	1117661	1123438	1123438	1123439
		03/11/2009	03/11/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009	06/05/2009
	Sample Time	10:05	10:05	10:05	10:05	10:25	10:25	10:25
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M81204-1	M81204-2	M81204-7	M81204-8	M83394-16	M83394-17	M83394-18
Constituent	Units							
Chloroform	ug/L					1.4		1.4
Toluene	ug/L	2.5		2.4				
·								
•								
•			+					
•								
•		-	+					
•			+					
•								

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		ter Monitor	Loureiro Engineering Ass						
	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	
	Sample ID	1123439	1130895	1130895	1130896	1130896	1136013	1136013	
	Sample Date	06/05/2009	09/11/2009	09/11/2009	09/11/2009	09/11/2009	12/08/2009	12/08/2009	
	Sample Time	10:25	10:29	10:29	10:29	10:29	12:55	12:55	
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M83394-19	M85761-16	M85761-7	M85761-17	M85761-18	M87915-1	M87915-2	
Constituent	Units								
Date Metals Analyzed	-	06/11/2009	09/16/2009			09/16/2009		12/14/2009	
Date Organics Analyzed	-			09/18/2009	09/19/2009		12/15/2009		
Date Physical Analyzed	-			09/23/2009	09/23/2009		12/19/2009		
Arsenic	mg/L								
Arsenic (unfiltered)	mg/L	0.0105	0.0101			0.0116		0.0066	
Barium (unfiltered)	mg/L	0.3	0.309			0.343		0.351	
Cadmium (unfiltered)	mg/L								
Chromium, Total (unfiltered)	mg/L								
Copper (unfiltered)	mg/L								
Nickel (unfiltered)	mg/L	0.0468	0.0540			0.0548		0.0894	
Zinc (unfiltered)	mg/L								
Total Petroleum Hydrocarbons (CT ETPH)	mg/L			0.202	0.219		0.268		
Benzene	ug/L			0.54			0.56		
1,1,1-Trichloroethane	ug/L			7.2	12.0		3.2		
1,1,2-Trichlorotrifluoroethane	ug/L								
1,1-Dichloroethane	ug/L			7.3			3.5		
1,2-Dichloroethane	ug/L			2.1			1.2		
Chloroethane	ug/L						4.3		
Methyl tert-Butyl ether	ug/L								
1,1-Dichloroethylene	ug/L			32.2	35.5		10		
trans-1,2-Dichloroethylene	ug/L			1.9					
cis-1,2-Dichloroethylene	ug/L			38.4	48.7		10.7		
Vinyl Chloride	ug/L			19.8	17.2		3.1		
Tetrachloroethylene	ug/L			22.3	19.6		7.6		
Trichloroethylene	ug/L			162	194		63.3		
Tetrahydrofuran	ug/L			58.9			18.4		
Chloromethane	ug/L								
Methylene Chloride	ug/L								

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		ter Monitori				Loureiro Engineering Associates, Inc.			
		WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	
	Sample ID	1123439	1130895	1130895	1130896	1130896	1136013	1136013	
		06/05/2009	09/11/2009	09/11/2009	09/11/2009	09/11/2009	12/08/2009	12/08/2009	
	Sample Time	10:25	10:29	10:29	10:29	10:29	12:55	12:55	
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M83394-19	M85761-16	M85761-7	M85761-17	M85761-18	M87915-1	M87915-2	
Constituent	Units								
Chloroform	ug/L								
Toluene	ug/L								

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	Groundwater Monitoring Report Loureiro Engineering A							
	Location ID	WT-MW-50	WT-MW-50	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-57
	Sample ID	1136028	1136028	1117652	1117652	1123433	1123433	1130880
	Sample Date	12/08/2009	12/08/2009	03/11/2009	03/11/2009	06/04/2009	06/04/2009	09/09/2009
	Sample Time	12:55	12:55	10:55	10:55	14:45	14:45	11:46
	Sample Depth	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM						
	Lab. Number	M87915-3	M87915-4	M81204-10	M81204-11	M83376-3	M83376-4	M85689-1
Constituent	Units							
Date Metals Analyzed	-		12/14/2009		03/13/2009		06/11/2009	
Date Organics Analyzed	-	12/21/2009		03/18/2009		06/09/2009		09/11/2009
Date Physical Analyzed	-	12/19/2009		03/17/2009				09/17/2009
Arsenic	mg/L							
Arsenic (unfiltered)	mg/L		0.0074					
Barium (unfiltered)	mg/L		0.349		0.307		0.266	
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L							
Copper (unfiltered)	mg/L							
Nickel (unfiltered)	mg/L		0.0864		0.0706		0.0890	
Zinc (unfiltered)	mg/L							
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.209		0.129				0.157
Benzene	ug/L	0.65						
1,1,1-Trichloroethane	ug/L	5.0						
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L	5.8						
1,2-Dichloroethane	ug/L	1.4						
Chloroethane	ug/L	5.8						
Methyl tert-Butyl ether	ug/L							
1,1-Dichloroethylene	ug/L	13.4						
trans-1,2-Dichloroethylene	ug/L							
cis-1,2-Dichloroethylene	ug/L	17.6		1.5		2.0		4.3
Vinyl Chloride	ug/L	4.3						
Tetrachloroethylene	ug/L	6.4		6.2		4.1		6.7
Trichloroethylene	ug/L	80.3		24.7		8.3		19.5
Tetrahydrofuran	ug/L	23.3						
Chloromethane	ug/L							
Methylene Chloride	ug/L							
Weinylene Chioride								

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			ring Report			Loureiro Engineering Associates, Inc.			
		WT-MW-50	WT-MW-50	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-57	
	Sample ID	1136028	1136028	1117652	1117652	1123433	1123433	1130880	
	Sample Date	12/08/2009	12/08/2009	03/11/2009	03/11/2009	06/04/2009	06/04/2009	09/09/2009	
	Sample Time	12:55	12:55	10:55	10:55	14:45	14:45	11:46	
	Sample Depth	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M87915-3	M87915-4	M81204-10	M81204-11	M83376-3	M83376-4	M85689-1	
Constituent	Units								
Chloroform	ug/L								
Toluene	ug/L								
•									
•									
•									
•									
•									
•									
•									
•									
•									
•									
•									

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	Groundwa	ter mionito	ing Keport			Loui	<u> </u>	ig Associates, inc.
	Location ID	WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-58
	Sample ID	1130880	1136010	1136010	1117653	1117653	1123428	1123428
	Sample Date	09/09/2009	12/08/2009	12/08/2009	03/11/2009	03/11/2009	06/04/2009	06/04/2009
	Sample Time	11:46	15:15	15:15	13:35	13:35	15:20	15:20
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM						
	Lab. Number	M85689-2	M87915-11	M87915-12	M81204-12	M81204-13	M83376-14	M83376-15
Constituent	Units							
Date Metals Analyzed	-	09/15/2009		12/14/2009		03/13/2009		06/11/2009
Date Organics Analyzed	-		12/15/2009		03/18/2009		06/10/2009	
Date Physical Analyzed	-				03/17/2009			
Arsenic	mg/L							
Arsenic (unfiltered)	mg/L					0.0053		0.0057
Barium (unfiltered)	mg/L	0.376		0.365		0.218		
Cadmium (unfiltered)	mg/L							
Chromium, Total (unfiltered)	mg/L							
Copper (unfiltered)	mg/L	0.0374						
Nickel (unfiltered)	mg/L	0.0797						
Zinc (unfiltered)	mg/L							
Total Petroleum Hydrocarbons (CT ETPH)	mg/L				0.121			
Benzene	ug/L							
1,1,1-Trichloroethane	ug/L							
1,1,2-Trichlorotrifluoroethane	ug/L							
1,1-Dichloroethane	ug/L							
1,2-Dichloroethane	ug/L							
Chloroethane	ug/L							
Methyl tert-Butyl ether	ug/L							
1,1-Dichloroethylene	ug/L							
trans-1,2-Dichloroethylene	ug/L							
cis-1,2-Dichloroethylene	ug/L		3.6					
Vinyl Chloride	ug/L							
Tetrachloroethylene	ug/L		4.2		2.0			
Trichloroethylene	ug/L		17.6		1.6		1.2	
Tetrahydrofuran	ug/L							
Chloromethane	ug/L							
Methylene Chloride	ug/L							

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			ring Report			Loureiro Engineering Associates, Inc			
		WT-MW-57	WT-MW-57	WT-MW-57	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-58	
	Sample ID	1130880	1136010	1136010	1117653	1117653	1123428	1123428	
	Sample Date	09/09/2009	12/08/2009	12/08/2009	03/11/2009	03/11/2009	06/04/2009	06/04/2009	
		11:46	15:15	15:15	13:35	13:35	15:20	15:20	
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M85689-2	M87915-11	M87915-12	M81204-12	M81204-13	M83376-14	M83376-15	
Constituent	Units								
Chloroform	ug/L								
Toluene	ug/L								
•									
•									
•									
•									
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	Groundwa	ter mionito	ing Keport			Loureiro Engineering Associates					
	Location ID	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59	WT-MW-59	WT-MW-59			
	Sample ID	1130892	1130892	1136020	1117654	1117654	1123427	1123427			
	Sample Date	09/11/2009	09/11/2009	12/09/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009			
	Sample Time	14:40	14:40	11:20	15:20	15:20	10:45	10:45			
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00			
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM			
	Lab. Number	M85761-14	M85761-15	M87994-3	M81204-14	M81204-15	M83394-1	M83394-2			
Constituent	Units										
Date Metals Analyzed	-		09/16/2009			03/13/2009		06/11/2009			
Date Organics Analyzed	-	09/19/2009		12/17/2009	03/18/2009		06/12/2009				
Date Physical Analyzed	-	09/23/2009			03/17/2009		06/18/2009				
Arsenic	mg/L										
Arsenic (unfiltered)	mg/L		0.0048								
Barium (unfiltered)	mg/L		0.243								
Cadmium (unfiltered)	mg/L					0.0293		0.0619			
Chromium, Total (unfiltered)	mg/L										
Copper (unfiltered)	mg/L										
Nickel (unfiltered)	mg/L					1.51		1.66			
Zinc (unfiltered)	mg/L					0.0268					
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.0808			1.24		0.763				
Benzene	ug/L										
1,1,1-Trichloroethane	ug/L										
1,1,2-Trichlorotrifluoroethane	ug/L										
1,1-Dichloroethane	ug/L				20.6		23.4				
1,2-Dichloroethane	ug/L										
Chloroethane	ug/L										
Methyl tert-Butyl ether	ug/L										
1,1-Dichloroethylene	ug/L										
trans-1,2-Dichloroethylene	ug/L										
cis-1,2-Dichloroethylene	ug/L	1.6		2.9	14.9		15.5				
Vinyl Chloride	ug/L				20.4		24.1				
Tetrachloroethylene	ug/L	1.8		19.6	2.3		2.2				
Trichloroethylene	ug/L	1.4		6.5	6.5		6.9				
Tetrahydrofuran	ug/L										
Chloromethane	ug/L										
Methylene Chloride	ug/L						2.6				

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		er Monitori				Loure	iro Engineering	Associates, Inc.
		WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59	WT-MW-59	WT-MW-59
	Sample ID	1130892	1130892	1136020	1117654	1117654	1123427	1123427
		09/11/2009	09/11/2009	12/09/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009
		14:40	14:40	11:20	15:20	15:20	10:45	10:45
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
		ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M85761-14	M85761-15	M87994-3	M81204-14	M81204-15	M83394-1	M83394-2
Constituent	Units							
Chloroform	ug/L				1.1		1.2	
Toluene	ug/L							

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Laboratory	WT-MW-59 1130891 09/11/2009 12:40 8.00' - 18.00	WT-MW-59 1130891 09/11/2009 12:40	Sample ID 1130891 1130891 1136021 1136021 Sample Date 09/11/2009 09/11/2009 12/09/2009 12/09/2009									
Sample Date Sample Time Sample Depth Laboratory	09/11/2009 12:40 8.00' - 18.00	09/11/2009 12:40	12/09/2009									
Sample Time Sample Depth Laboratory	12:40 8.00' - 18.00	12:40		12/09/2009								
Sample Depth Laboratory	8.00' - 18.00											
Laboratory			12:40	12:40								
		8.00' - 18.00	8.00' - 18.00	8.00' - 18.00								
Lob Number	ACTM	ACTM	ACTM	ACTM								
Lab. Nullibei	M85761-1	M85761-2	M87994-5	M87994-6								
Units												
-		09/16/2009		12/17/2009								
-	09/18/2009		12/17/2009									
-	09/23/2009		12/23/2009									
mg/L												
mg/L												
mg/L												
mg/L		0.0147		0.0708								
mg/L												
mg/L				0.0253								
mg/L		1.09		1.95								
mg/L												
mg/L	0.997		0.555									
ug/L	0.51											
ug/L												
ug/L	5.8											
ug/L	29.1		4.5									
ug/L												
ug/L												
ug/L												
ug/L												
ug/L	1.1											
ug/L	14.7		2.7									
ug/L	32.0		3.1									
ug/L	3.2		1.5									
ug/L	6.6											
ug/L												
ug/L												
ug/L	2.8											
	- mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	Units -	Units -	Units -	Units	Units						

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	Groundwat					Loure	Loureiro Engineering Associates, Inc			
	Location ID	WT-MW-59	WT-MW-59	WT-MW-59	WT-MW-59					
	Sample ID	1130891	1130891	1136021	1136021					
	Sample Date	09/11/2009	09/11/2009	12/09/2009	12/09/2009					
	Sample Time	12:40	12:40	12:40	12:40					
	Sample Depth	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00					
	Laboratory	ACTM	ACTM	ACTM	ACTM					
	Lab. Number	M85761-1	M85761-2	M87994-5	M87994-6					
Constituent	Units									
Chloroform	ug/L	1.2								
Toluene	ug/L									
		1								
•										
•										
					1	1	1	1		

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		ter Monitori			Loureiro Engineering Associates, Inc.				
	Location ID	WT-MW-19SR	WT-MW-19SR	WT-MW-19SR	WT-MW-48	WT-MW-48	WT-MW-48	WT-MW-48	
	Sample ID	1123437	1123437	1130890	1117649	1123432	1123432	1130883	
	Sample Date	06/05/2009	06/05/2009	09/11/2009	03/10/2009	06/04/2009	06/04/2009	09/10/2009	
	Sample Time	14:20	14:20	10:25	10:35	12:00	12:00	14:45	
	Sample Depth	3.00' - 12.50	3.00' - 12.50	3.00' - 12.50					
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M83394-5	M83394-6	M85761-4	M81183-8	M83376-1R	M83376-2	M85739-8	
Constituent	Units								
Date Metals Analyzed	=		06/11/2009	09/16/2009	03/12/2009	06/25/2009	06/11/2009	09/16/2009	
Date Organics Analyzed	-	06/17/2009							
Arsenic	-					0.0089 mg/L			
Arsenic (unfiltered)	=		0.0042 mg/L	0.0047 mg/L	0.0047 mg/L		0.0108 mg/L	0.0116 mg/L	
Cadmium (unfiltered)	=								
Copper (unfiltered)	-		0.0692 mg/L						
Nickel (unfiltered)	-								
Tetrachloroethylene	-	354 ug/L							
		1							
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Location ID		Groundwa			Loureiro Engineering Associates, Inc.				
Sample Date 12/08/2009 03/11/2009 03/11/2009 06/05/2009 06/05/2009 09/11/2009 09/11/2009 Sample Time 15:05 10:05 10:05 10:25 10:25 10:29 10:29 Laboratory ACTM AC			WT-MW-48	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
Sample Time 15:05 10:05 10:05 10:25 10:25 10:29 10:29 10:29		-	1136016	1117655	1117661	1123438	1123439	1130895	1130896
Sample Depth Sample Depth 16.00' - 26.0 16.00' - 2			12/08/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009
Laboratory ACTM M83394-19 M83394-19 M85761-18		Sample Time	15:05	10:05	10:05	10:25	10:25	10:29	10:29
Lab. Number M87915-23 M81204-2 M81204-8 M83394-17 M83394-19 M85761-16 M85761-18 Constituent Units 5 6 6 6 6 Date Metals Analyzed - 12/14/2009 03/17/2009 06/11/2009 06/11/2009 09/16/2009 09/16/2009 Date Organics Analyzed - - 6		Sample Depth		16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
Constituent Units 6 6 6 6 6 6 6 6 6 6 7 9 12/14/2009 03/17/2009 03/17/2009 06/11/2009 09/16/2		Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
Date Metals Analyzed - 12/14/2009 03/17/2009 03/17/2009 06/11/2009 09/16/2009 09/16/2009 Date Organics Analyzed -		Lab. Number	M87915-23	M81204-2	M81204-8	M83394-17	M83394-19	M85761-16	M85761-18
Date Organics Analyzed -	Constituent	Units							
Arsenic - Long the properties of the properti	Date Metals Analyzed	-	12/14/2009	03/17/2009	03/17/2009	06/11/2009	06/11/2009	09/16/2009	09/16/2009
Arsenic (unfiltered) - 0.0101 mg/L 0.0095 mg/L 0.0076 mg/L 0.0114 mg/L 0.0105 mg/L 0.0101 mg/L 0.0116 mg/L Cadmium (unfiltered) - Image: Composition of the composit	Date Organics Analyzed	-							
Cadmium (unfiltered) - <td>Arsenic</td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Arsenic	-							
Copper (unfiltered) -	Arsenic (unfiltered)	-	0.0101 mg/L	0.0095 mg/L	0.0076 mg/L	0.0114 mg/L	0.0105 mg/L	0.0101 mg/L	0.0116 mg/L
Nickel (unfiltered) -	Cadmium (unfiltered)	-							
	Copper (unfiltered)	-							
Tetrachloroethylene - Image: Control of the control of	Nickel (unfiltered)	-							
S. S	Tetrachloroethylene	-							
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Groundwater Monitoring Report

			ing Keport	Loureiro Engineering Associates, Inc.				
	Location ID	WT-MW-50	WT-MW-50	WT-MW-58	WT-MW-58	WT-MW-58	WT-MW-59	WT-MW-59
	Sample ID	1136013	1136028	1117653	1123428	1130892	1117654	1123427
	Sample Date	12/08/2009	12/08/2009	03/11/2009	06/04/2009	09/11/2009	03/11/2009	06/05/2009
	Sample Time	12:55	12:55	13:35	15:20	14:40	15:20	10:45
	Sample Depth	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M87915-2	M87915-4	M81204-13	M83376-15	M85761-15	M81204-15	M83394-2
Constituent	Units							
Date Metals Analyzed	-	12/14/2009	12/14/2009	03/17/2009	06/11/2009	09/16/2009	03/13/2009	06/11/2009
Date Organics Analyzed	-							
Arsenic	-							
Arsenic (unfiltered)	-	0.0066 mg/L	0.0074 mg/L	0.0053 mg/L	0.0057 mg/L	0.0048 mg/L		
Cadmium (unfiltered)	-						0.0293 mg/L	0.0619 mg/L
Copper (unfiltered)	-							
Nickel (unfiltered)	-						1.51 mg/L	1.66 mg/L
Tetrachloroethylene	-							
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Groundwater Monitoring Report

	Groundwat				Lourei	ro Engineering	Associates, Inc.
	Location ID	WT-MW-59	WT-MW-59				
	Sample ID	1130891	1136021				
	Sample Date	09/11/2009	12/09/2009				
	Sample Time	12:40	12:40				
	Sample Depth	8.00' - 18.00	8.00' - 18.00				
	Laboratory	ACTM	ACTM				
	Lab. Number	M85761-2	M87994-6				
Constituent	Units						
Date Metals Analyzed	=	09/16/2009	12/17/2009				
Date Organics Analyzed	-						
Arsenic	-						
Arsenic (unfiltered)	-						
Cadmium (unfiltered)	-	0.0147 mg/L	0.0708 mg/L				
Copper (unfiltered)	-						
Nickel (unfiltered)	-	1.09 mg/L	1.95 mg/L				
Tetrachloroethylene	-						
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Table 5-4 EXCEEDANCES OF INDUSTRIAL/COMMERCIAL VOLATILIZATION CRITERIA Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual **Groundwater Monitoring Report**

		ter Monitori				Loureiro Engineering Associates, Inc.			
	Location ID	WT-MW-19SR	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	
	Sample ID	1123437	1117656	1123436	1130897	1134565	1135172	1136012	
	Sample Date	06/05/2009	03/11/2009	06/05/2009	09/11/2009	10/30/2009	11/23/2009	12/08/2009	
	Sample Time	14:20	12:30	12:15	13:21	10:20	13:40	13:10	
	Sample Depth	3.00' - 12.50	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M83394-5	M81204-3	M83394-3	M85761-5	M86954-1	M87560-17	M87915-9	
Constituent	Units								
Date Organics Analyzed	-	06/12/2009	03/18/2009	06/12/2009	09/18/2009	11/12/2009	12/05/2009	12/15/2009	
1,1-Dichloroethylene	-	9.1 ug/L		7.3 ug/L	22.0 ug/L	28.2 ug/L	14.3 ug/L		
Vinyl Chloride	-	45.2 ug/L	30.5 ug/L	81.1 ug/L	75.7 ug/L	90.6 ug/L	96.8 ug/L	60.5 ug/L	
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Table 5-4 EXCEEDANCES OF INDUSTRIAL/COMMERCIAL VOLATILIZATION CRITERIA Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report

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		er Monitorii			Loureiro Engineering Associates, Inc.				
			WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	
	-		1117661	1123438	1123439	1130895	1130896	1136013	
			03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	12/08/2009	
		10:05	10:05	10:25	10:25	10:29	10:29	12:55	
		16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M81204-1	M81204-7	M83394-16	M83394-18	M85761-7	M85761-17	M87915-1	
Constituent	Units								
Date Organics Analyzed	-	03/18/2009	03/18/2009	06/12/2009	06/12/2009	09/18/2009	09/19/2009	12/15/2009	
1,1-Dichloroethylene	-	35.1 ug/L	36.3 ug/L	49.0 ug/L	51.8 ug/L	32.2 ug/L	35.5 ug/L	10 ug/L	
Vinyl Chloride	-	14.7 ug/L	15.3 ug/L	18.4 ug/L	19.1 ug/L	19.8 ug/L	17.2 ug/L	3.1 ug/L	

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Table 5-4 EXCEEDANCES OF INDUSTRIAL/COMMERCIAL VOLATILIZATION CRITERIA Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual **Groundwater Monitoring Report**

	Groundwai					Loureiro Engineering Associates, Inc.			
	Location ID	WT-MW-50	WT-MW-59	WT-MW-59	WT-MW-59	WT-MW-59			
	Sample ID	1136028	1117654	1123427	1130891	1136021			
	Sample Date	12/08/2009	03/11/2009	06/05/2009	09/11/2009	12/09/2009			
	Sample Time	12:55	15:20	10:45	12:40	12:40			
	Sample Depth	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00			
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM			
	Lab. Number	M87915-3	M81204-14	M83394-1	M85761-1	M87994-5			
Constituent	Units								
Date Organics Analyzed	-	12/21/2009	03/18/2009	06/12/2009	09/18/2009	12/17/2009			
1,1-Dichloroethylene	-	13.4 ug/L							
Vinyl Chloride	-	4.3 ug/L	20.4 ug/L	24.1 ug/L	32.0 ug/L	3.1 ug/L			
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Table 5-5 EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA

Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual

Groundwater Monitoring Report

		er Monitori			Loureiro Engineering Associa					
	Location ID		WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40		
	Sample ID	1123437	1117656	1123436	1130897	1134565	1135172	1136012		
		06/05/2009	03/11/2009	06/05/2009	09/11/2009	10/30/2009	11/23/2009	12/08/2009		
	Sample Time	14:20	12:30	12:15	13:21	10:20	13:40	13:10		
	Sample Depth	3.00' - 12.50	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0		
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM		
	Lab. Number	M83394-5	M81204-3	M83394-3	M85761-5	M86954-1	M87560-17	M87915-9		
Constituent	Units									
Date Organics Analyzed	-	06/17/2009	03/18/2009	06/12/2009	09/18/2009	11/12/2009	12/05/2009	12/15/2009		
1,1-Dichloroethylene	-	9.1 ug/L	4.6 ug/L	7.3 ug/L	22.0 ug/L	28.2 ug/L	14.3 ug/L	4.1 ug/L		
Vinyl Chloride	-	45.2 ug/L	30.5 ug/L	81.1 ug/L	75.7 ug/L	90.6 ug/L	96.8 ug/L	60.5 ug/L		
Trichloroethylene	-	388 ug/L								
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Table 5-5 EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual

Groundwater Monitoring Report

			ring Report			Loureiro Engineering Associates, Inc.			
	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	
	Sample ID	1117655	1117661	1123438	1123439	1130895	1130896	1136013	
		03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	12/08/2009	
	Sample Time	10:05	10:05	10:25	10:25	10:29	10:29	12:55	
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M81204-1	M81204-7	M83394-16	M83394-18	M85761-7	M85761-17	M87915-1	
Constituent	Units								
Date Organics Analyzed	-	03/18/2009	03/18/2009	06/17/2009	06/17/2009	09/18/2009	09/19/2009	12/15/2009	
1,1-Dichloroethylene	-	35.1 ug/L	36.3 ug/L	49.0 ug/L	51.8 ug/L	32.2 ug/L	35.5 ug/L	10 ug/L	
Vinyl Chloride	-	14.7 ug/L	15.3 ug/L	18.4 ug/L	19.1 ug/L	19.8 ug/L	17.2 ug/L	3.1 ug/L	
Trichloroethylene	-	305 ug/L	306 ug/L	296 ug/L	322 ug/L				
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Table 5-5 EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA



Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual

Groundwater Monitoring Report

Constituent Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride Trichloroethylene	Location ID Sample ID Sample Date Sample Time Sample Depth Laboratory Lab. Number Units	WT-MW-50 1136028 12/08/2009 12:55 16.00' - 26.0 ACTM M87915-3 12/21/2009 13.4 ug/L	WT-MW-59 1117654 03/11/2009 15:20 8.00' - 18.00 ACTM M81204-14 03/18/2009	WT-MW-59 1123427 06/05/2009 10:45 8.00' - 18.00 ACTM M83394-1	WT-MW-59 1130891 09/11/2009 12:40 8.00' - 18.00 ACTM M85761-1	WT-MW-59 1136021 12/09/2009 12:40 8.00' - 18.00 ACTM M87994-5	
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride	Sample Date Sample Time Sample Depth Laboratory Lab. Number	12/08/2009 12:55 16.00' - 26.0 ACTM M87915-3	03/11/2009 15:20 8.00' - 18.00 ACTM M81204-14	06/05/2009 10:45 8.00' - 18.00 ACTM	09/11/2009 12:40 8.00' - 18.00 ACTM	12/09/2009 12:40 8.00' - 18.00 ACTM	
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride	Sample Time Sample Depth Laboratory Lab. Number	12:55 16.00' - 26.0 ACTM M87915-3	15:20 8.00' - 18.00 ACTM M81204-14	10:45 8.00' - 18.00 ACTM	12:40 8.00' - 18.00 ACTM	12:40 8.00' - 18.00 ACTM	
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride	Sample Depth Laboratory Lab. Number	16.00' - 26.0 ACTM M87915-3 12/21/2009	8.00' - 18.00 ACTM M81204-14	8.00' - 18.00 ACTM	8.00' - 18.00 ACTM	8.00' - 18.00 ACTM	
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride	Laboratory Lab. Number	ACTM M87915-3 12/21/2009	ACTM M81204-14	ACTM	ACTM	ACTM	
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride	Lab. Number	M87915-3 12/21/2009	M81204-14				
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride		12/21/2009		M83394-1	M85761-1	M87994-5	
Date Organics Analyzed 1,1-Dichloroethylene Vinyl Chloride	Units		02/10/2000				1
1,1-Dichloroethylene Vinyl Chloride	-		02/10/2000	1			
Vinyl Chloride	-	13.4 ug/L	03/18/2009	06/12/2009	09/18/2009	12/17/2009	
Vinyl Chloride	-						
		4.3 ug/L	20.4 ug/L	24.1 ug/L	32.0 ug/L	3.1 ug/L	
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Table 5-6

EXCEEDANCES OF INDUSTRIAL/COMMERCIAL VOLATILIZATION CRITERIA (2003 DRAFT)



Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual

	·							ng Associates, Inc.	
	Location ID	WT-MW-19SR	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-50	
	Sample ID	1123437	1123436	1130897	1134565	1135172	1136012	1117655	
	Sample Date	06/05/2009	06/05/2009	09/11/2009	10/30/2009	11/23/2009	12/08/2009	03/11/2009	
	Sample Time	14:20	12:15	13:21	10:20	13:40	13:10	10:05	
	Sample Depth	3.00' - 12.50	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	16.00' - 26.0	
	Laboratory	ACTM							
	Lab. Number	M83394-5	M83394-3	M85761-5	M86954-1	M87560-17	M87915-9	M81204-1	
Constituent	Units								
Date Organics Analyzed	-	06/17/2009	06/12/2009	09/18/2009	11/12/2009	12/05/2009	12/15/2009	03/18/2009	
Vinyl Chloride	-		81.1 ug/L	75.7 ug/L	90.6 ug/L	96.8 ug/L	60.5 ug/L		
Trichloroethylene	-	388 ug/L						305 ug/L	
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Table 5-6

EXCEEDANCES OF INDUSTRIAL/COMMERCIAL VOLATILIZATION CRITERIA (2003 DRAFT)



Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual

3 /		Loureiro Engineering Ass									
	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50				
	Sample ID	1117661	1123438	1123439	1130895	1130896	1136028				
	Sample Date	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009	12/08/2009				
	Sample Time	10:05	10:25	10:25	10:29	10:29	12:55				
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0				
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM				
	Lab. Number	M81204-7	M83394-16	M83394-18	M85761-7	M85761-17	M87915-3				
Constituent	Units										
Date Organics Analyzed	-	03/18/2009	06/17/2009	06/17/2009	09/18/2009	09/19/2009	12/21/2009				
Vinyl Chloride	-										
Trichloroethylene	-	306 ug/L	296 ug/L	322 ug/L	162 ug/L	194 ug/L	80.3 ug/L				
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Table 5-7 EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA (2003 DRAFT) Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual **Groundwater Monitoring Report**

		ter Monitori				Loureiro Engineering Associa				
	Location ID	WT-MW-19SR	WT-MW-19SR	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40	WT-MW-40		
	Sample ID	1123437	1135166	1117656	1123436	1130897	1134565	1135172		
	Sample Date	06/05/2009	11/23/2009	03/11/2009	06/05/2009	09/11/2009	10/30/2009	11/23/2009		
	Sample Time	14:20	10:00	12:30	12:15	13:21	10:20	13:40		
	Sample Depth	3.00' - 12.50	3.00' - 12.50	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0	10.00' - 19.0		
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM		
	Lab. Number	M83394-5	M87560-4	M81204-3	M83394-3	M85761-5	M86954-1	M87560-17		
Constituent	Units									
Date Organics Analyzed	-	06/17/2009	12/04/2009	03/18/2009	06/12/2009	09/18/2009	11/12/2009	12/05/2009		
Vinyl Chloride	-	45.2 ug/L		30.5 ug/L	81.1 ug/L	75.7 ug/L	90.6 ug/L	96.8 ug/L		
Tetrachloroethylene	-	354 ug/L								
Trichloroethylene	-	388 ug/L	34.1 ug/L							
Chloroform	-	42.7 ug/L								
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Table 5-7 EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA (2003 DRAFT) Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual **Groundwater Monitoring Report**

	Groundwa					Loureiro Engineering Associate				
	Location ID	WT-MW-40	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50		
	Sample ID	1136012	1117655	1117661	1123438	1123439	1130895	1130896		
	Sample Date	12/08/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009	09/11/2009	09/11/2009		
	Sample Time	13:10	10:05	10:05	10:25	10:25	10:29	10:29		
	Sample Depth	10.00' - 19.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0		
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM		
	Lab. Number	M87915-9	M81204-1	M81204-7	M83394-16	M83394-18	M85761-7	M85761-17		
Constituent	Units									
Date Organics Analyzed	-	12/15/2009	03/18/2009	03/18/2009	06/17/2009	06/17/2009	09/18/2009	09/19/2009		
Vinyl Chloride	-	60.5 ug/L	14.7 ug/L	15.3 ug/L	18.4 ug/L	19.1 ug/L	19.8 ug/L	17.2 ug/L		
Tetrachloroethylene	-									
Trichloroethylene	-		305 ug/L	306 ug/L	296 ug/L	322 ug/L	162 ug/L	194 ug/L		
Chloroform	-									
							1			
				1			+			
							+			

2 of 3 Printed on 12/28/2009

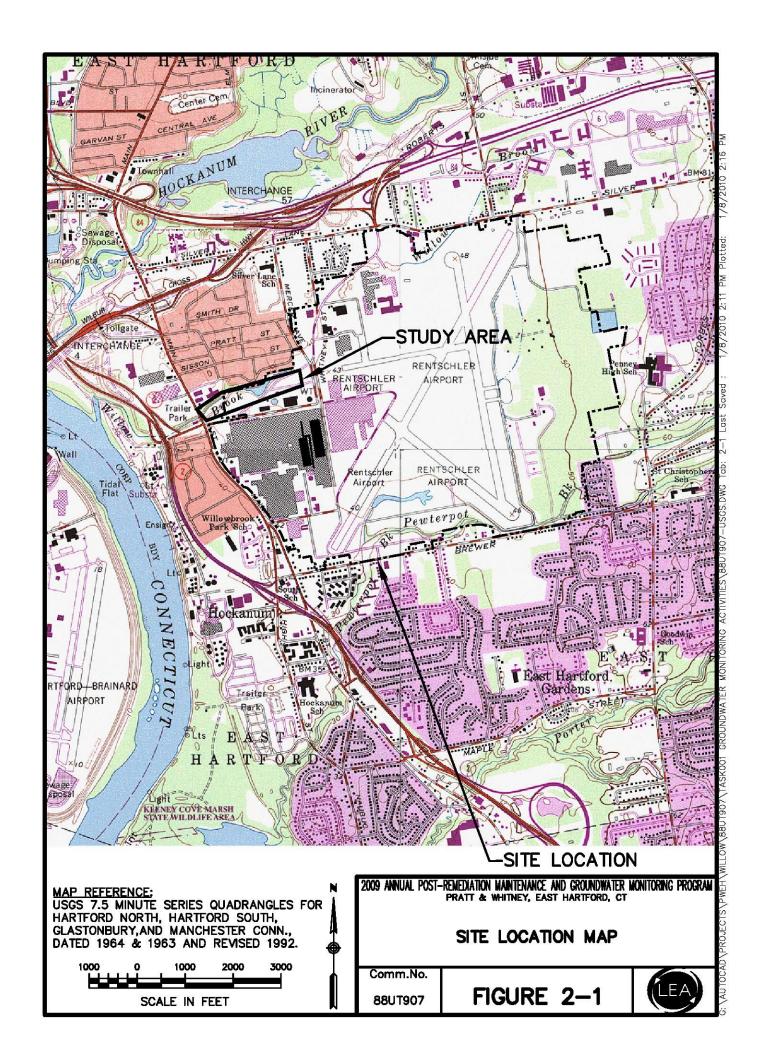
Table 5-7 EXCEEDANCES OF RESIDENTIAL VOLATILIZATION CRITERIA (2003 DRAFT) Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual **Groundwater Monitoring Report**

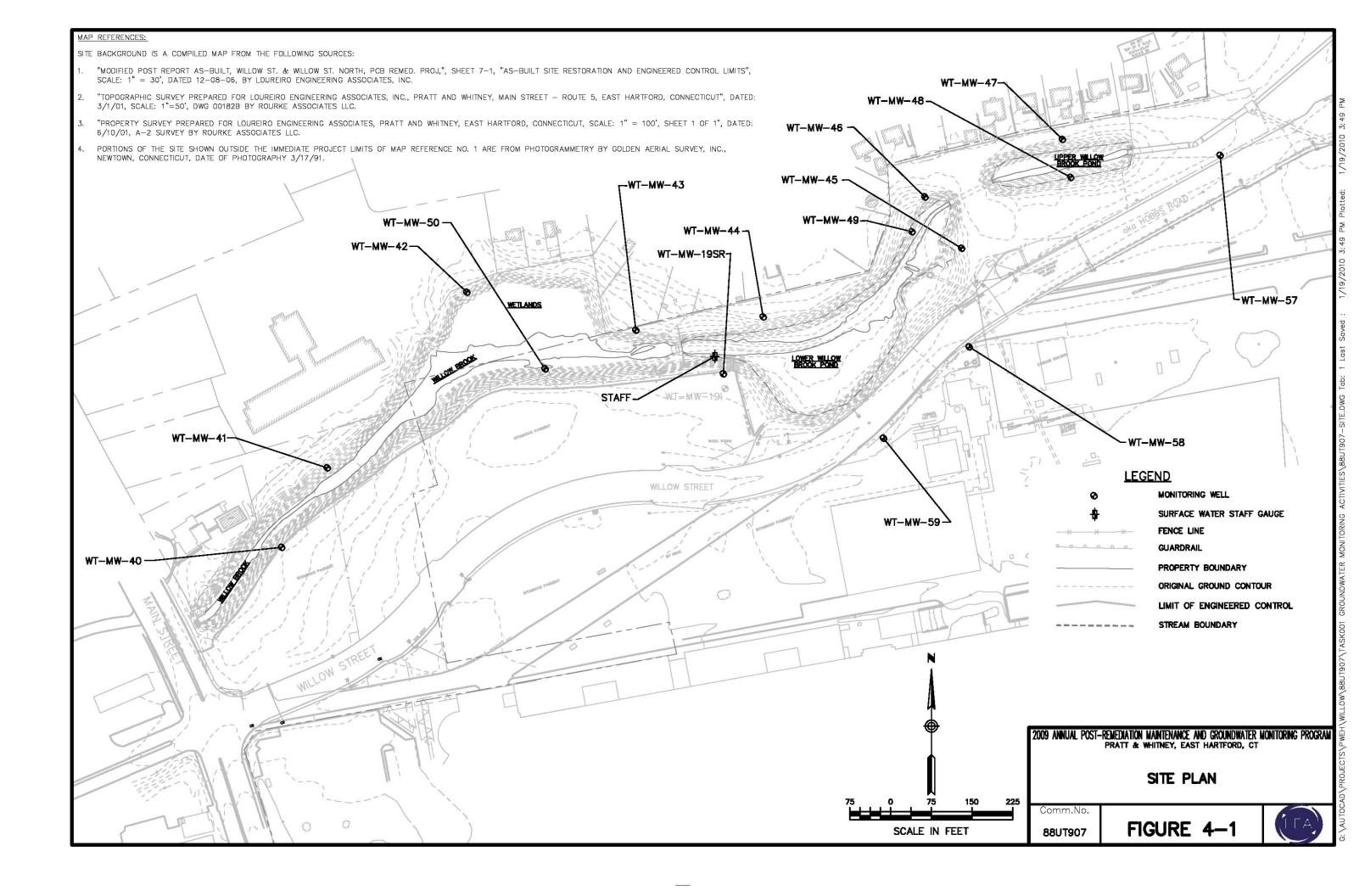
	Groundwater Monitoring Report					Loureiro Engineering Associates, Inc.		
	Location ID	WT-MW-50	WT-MW-50	WT-MW-59	WT-MW-59	WT-MW-59	WT-MW-59	
	Sample ID	1136013	1136028	1117654	1123427	1130891	1136021	
	Sample Date	12/08/2009	12/08/2009	03/11/2009	06/05/2009	09/11/2009	12/09/2009	
	Sample Time	12:55	12:55	15:20	10:45	12:40	12:40	
	Sample Depth	16.00' - 26.0	16.00' - 26.0	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	8.00' - 18.00	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M87915-1	M87915-3	M81204-14	M83394-1	M85761-1	M87994-5	
Constituent	Units							
Date Organics Analyzed	-	12/15/2009	12/21/2009	03/18/2009	06/12/2009	09/18/2009	12/17/2009	
Vinyl Chloride	-	3.1 ug/L	4.3 ug/L	20.4 ug/L	24.1 ug/L	32.0 ug/L	3.1 ug/L	
Tetrachloroethylene	-							
Trichloroethylene	-	63.3 ug/L	80.3 ug/L					
Chloroform	-							
·								
•								
•								
•								
•								
•								
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<u>•</u>								

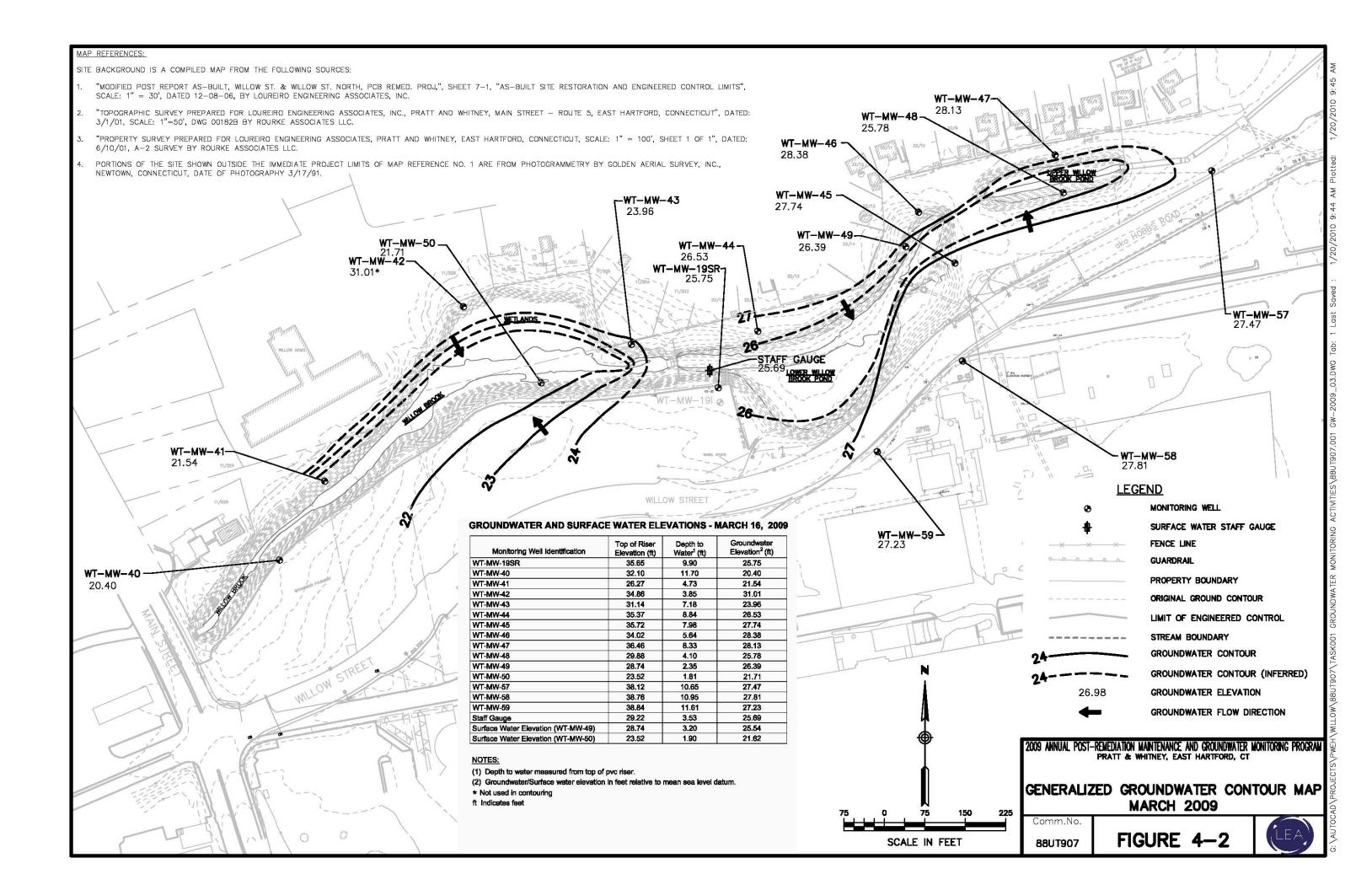
Printed on 12/28/2009 Page 3 of 3

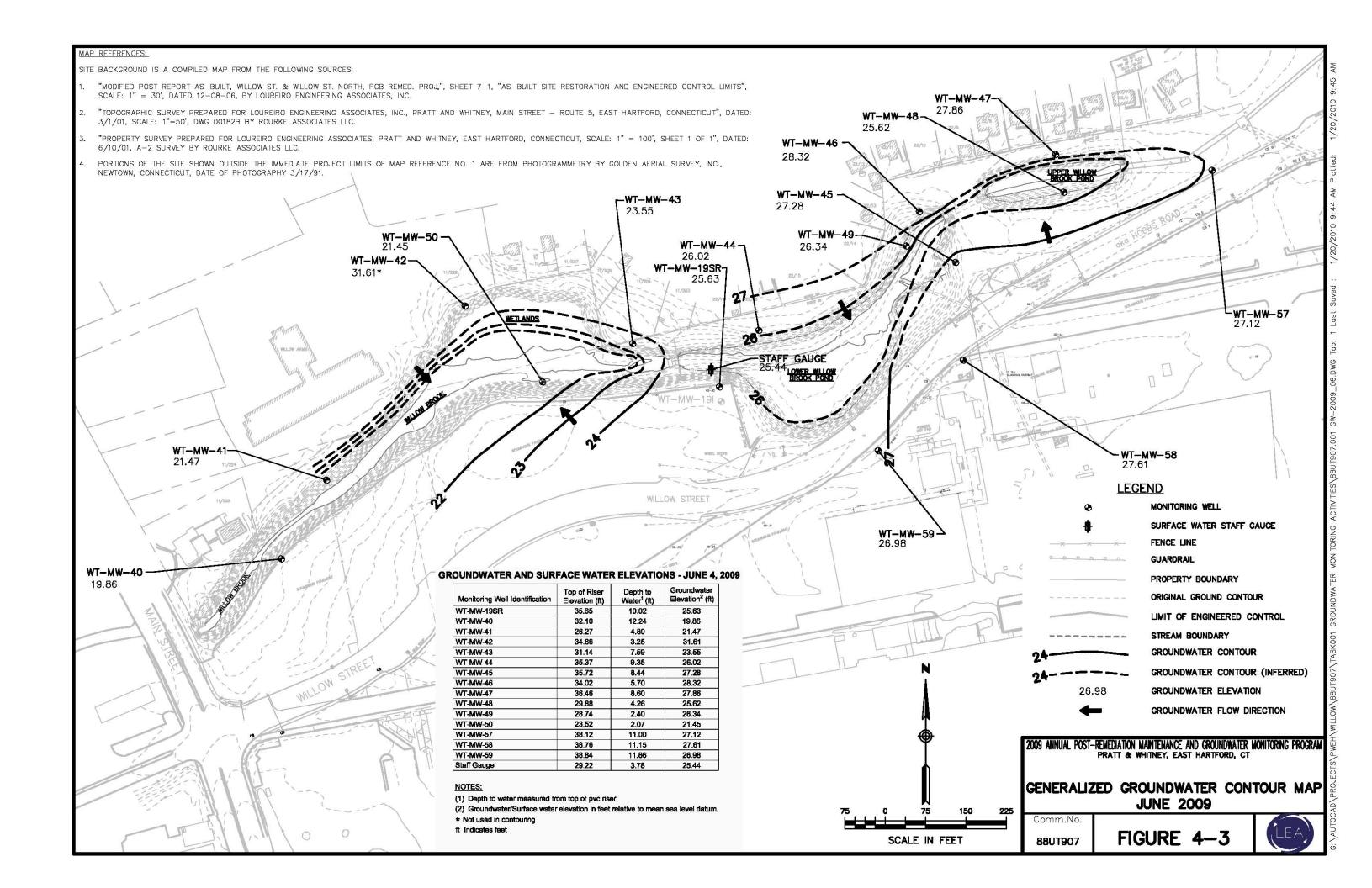
FIGURES

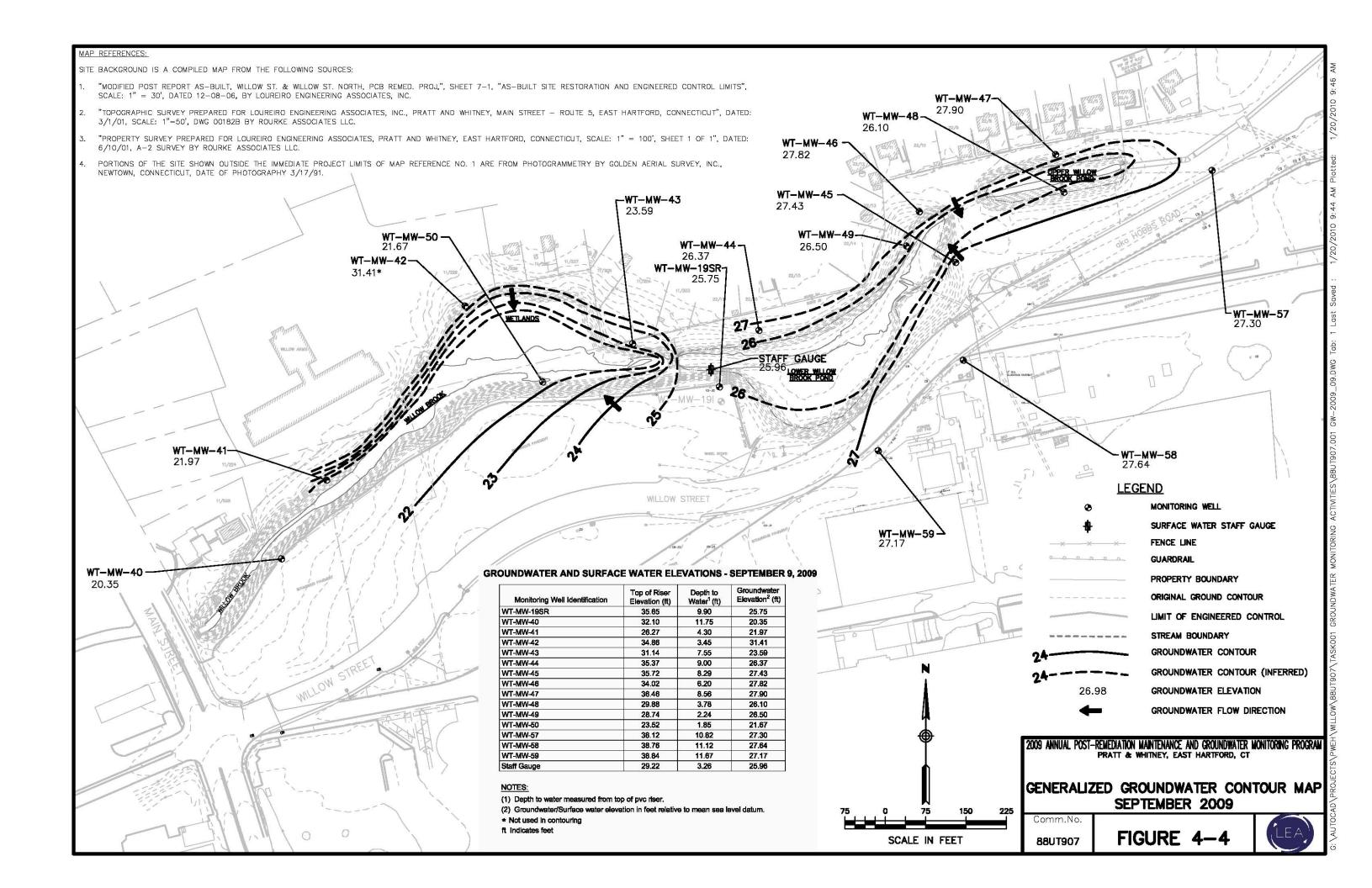


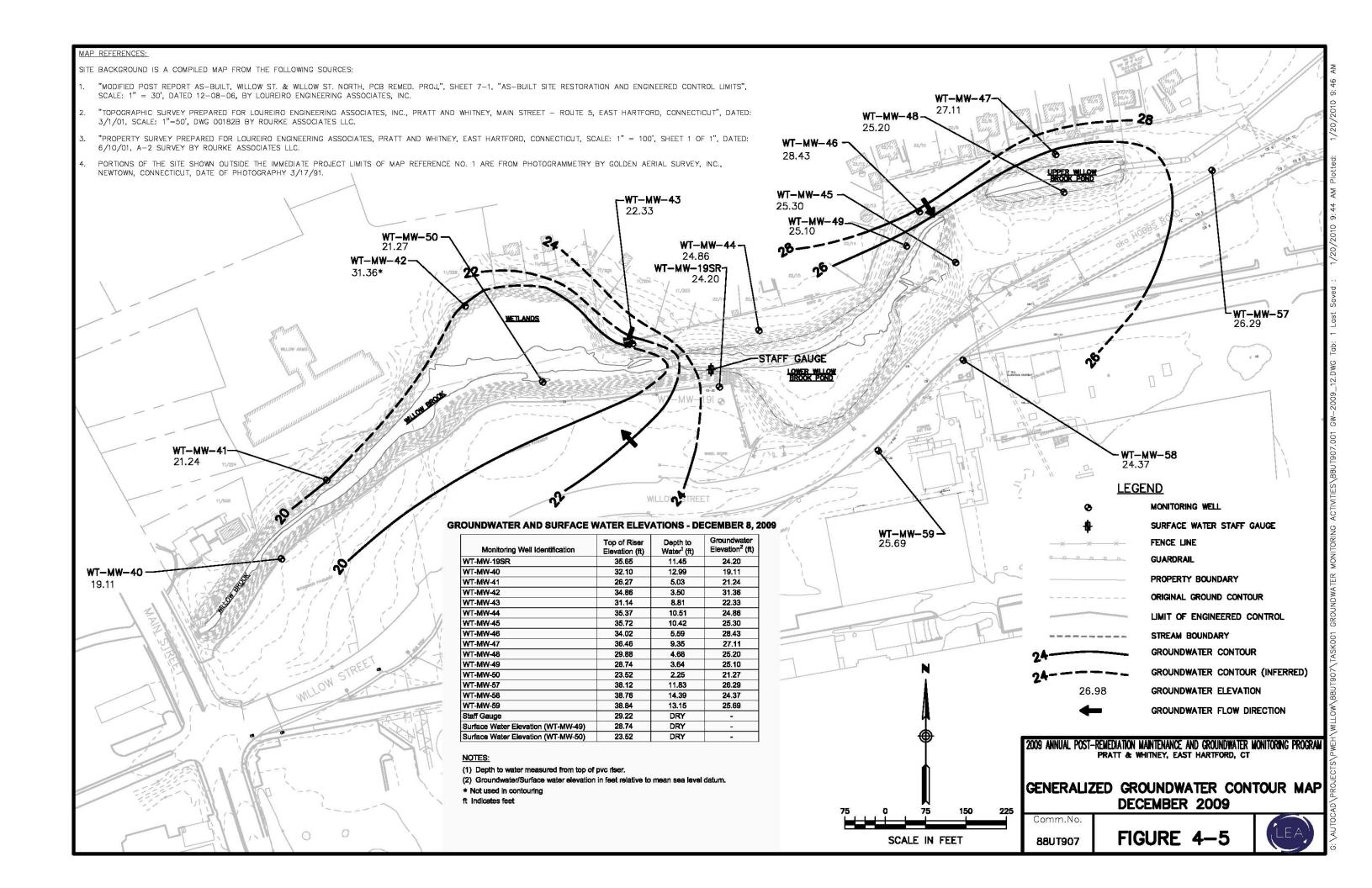












Appendix A Copies of Field Paperwork





DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

	88UT907.001						Page I of I
Project	UTC P&W Will	owpond (Quarterly GV	V Mo	on.		Date 3 / 10 / 0
Location	P&W East Hartf		the state of the s	Γ			
Client	Pratt & Whitney	Division	- JTot				,
Arrived at Site Site Activities	0800 D	eparted fi	om Site	160		cle 3 Personal Veneter (Start)	hicles 60 miles Return RT
Soil Sampling		Geoprobe	Work		Current P	Project Information	
✓ Groundwater Samp	oling	Concrete	Coring		Last San	nple Number Used	
Surface Water San	pling	Construct	ion			ation ID Used	60
Vapor/Air Samplir		Waste Ma	inagement		Current 1	Location (if not complete)	
Concrete Sampling					Sampling		see chains
Other Sampling		Inspection			Laborato	ories used	Accutest
Other Sampling		Site Walk	Over		Paperwo	rk & Equipment left at/in	office
7.00 VEVEN 1 10		Surveying	The state of the s		Site Con	tact	RLM
Well Development		Other (De	scribe)		Contract	ors on Site	LEA
on-productive Time							
✓ None		Weather			Time and	d place to meet contractors	60
Equipment Breakd	own		Equipment		-		
Late		Other (De	scribe)				
uality Assurance Chec	ks				Residuals Dispo		
Yes N/A No					Item	Approx. Amount	Container ID
	le labels complete				Soil/Solid)
ACC.	le/cooler seals OK				Groundwater	15 Gal.	707307
	mples obtained				Decon Fluid	0	
	s of custody				PPE		/
	rms/logs complete				Other		
	ondition OK	Weather	Conditions				
	&S Plan on site	Tempera	ture 45		Precipitation	none Wind	i Smph
Instru	ments calibrated	Commer	its				
hecked By						The state of the s	
Annual Control of the						4	
Robin Mulkinne							
	1						
xpendable Items Used				Equ	ipment Used		
ty Item			LEA Number	Qty	Item		LEA Number
Bailer, Disposable (s	pecify size)		090		Generator 3500	Watt	153
Decontamination Su			081		Meter, Conducti		022
Drum, Closed Top 5:	Gallon		086	-	Meter, pH/Temp		021
Filter, In Line	P. Cafete Itame		024	2		mall Tools & Equipment	152
Miscellaneous Health	A Salety Items		060	3	Pump, Grundfos	c (spec. Master or Isco)	073
Tuhing 10" NOS	17 TOTY		007	2	Pump, Submersi	T. T. T.	201
Tubing, 1/2", NOS Tubing, 3/8", NOS			025	+	Pump, Watera		038
Tubing, 1/2", NOS Tubing, 3/8", NOS Water, Distilled					Thermo-Anemor	meter	248
Tubing, 3/8", NOS					Turbidimeter		023
Tubing, 3/8", NOS				3	II S POLITICATION CONTROL		
Tubing, 3/8", NOS				1	VOC Analyzer,	Photovac 2020 (PID)	012
Tubing, 3/8", NOS				3	VOC Analyzer, Water Level Ind	icator	
Tubing, 3/8", NOS				1	VOC Analyzer, Water Level Ind		012
Tubing, 3/8", NOS				3	VOC Analyzer, Water Level Ind	icator	012
Tubing, 3/8", NOS	C. Scott Brown		Lubs	3	VOC Analyzer, Water Level Ind	icator Zental)	012



DAILY FIELD REPORT

Supplemental Sheet

Project UTC P&W Willowpond Quarterly GW Mon. Date 3 /10 / 09 Location P&W East Hartford, East Hartford, CT	LEA Comm. No.			Page 2 of 14
Description of Site Activities PRATE & Whitney Division - JTot Description of Site Activities PRATE & Whitney Division - JTot Description of Site Activities PRATE & Whitney Division - JTot Description of Site Activities PRATE & Whitney Division - JTot Description of Site Activities PRATE & Site Activities PRAT	Project	UTC P&W Willowpond Q	uarterly GW Mon.	Date 3 /10 / 09
Client Pratt & Whitney Division - JTot Description of Site Activities 7800 on site. Call & gay proset. Discussed. Hts. Began water levels. Began monitoring. Label monitoring. John Live Prickup. 1530 Off site. 1600 Field Personnel C. Scott Brown Luke Chmielecki Signatupe	Location	P&W East Hartford, East 1	Hartford, CT	
Description of Site Activities 0300 on site. Calità equipment. Discussed Hts. Began water levels. Began menitering. Plate Ison John John John John John John John Jo	Client	Pratt & Whitney Division	- JTot	
Col'd equipment Began water levels. Began mentering. Each montering. Sample Pickup. 1530 Offs.te. 1600 Field Personnel C. Scott Brown Luke Chmielecki Signature	Description of Sit			
Col'd equipment Began water levels. Began mentering. Each montering. Sample Pickup. 1530 Offs.te. 1600 Field Personnel C. Scott Brown Luke Chmielecki Signature	0800 on site.			
Began mon. tering. Bened mon. tering. Whatte, 1500 Sample Pickup. 1530 Off s.te. 1600 Sield Personnel C. Scott Brown Luke Chmielecki Signature	Calid equipme	4		
Began mon. tering. Bened mon. tering. Whatte, 1500 Sample Pickup. 1530 Off s.te. 1600 Sield Personnel C. Scott Brown Luke Chmielecki Signature	Discussed H+S			
Signature Signature C. Scott Brown Luke Chmielecki Signature	Reaso water les	ue le		
Esdel Personnel C. Scott Brown Luke Chmielecki Signature	Reca man tari	00		
Sample Prickup. 1530 Off 5.14e. 1600 Sield Personnel C. Scott Brown Luke Chmielecki Signatuge	5. 3.1 1	··9·		
Sample Prickup. 1530 Off 5.14e. 1600 Sield Personnel C. Scott Brown Luke Chmielecki Signatuge	Liberto ICAD	3.		
Field Personnel C. Scott Brown Luke Chmielecki Signatuge	Sanda Dick	1670		
Field Personnel C. Scott Brown Luke Chmielecki Signatuge	OCC - 1 - 1/00	. 1530		
Field Personnel C. Scott Brown Luke Chmielecki Signature	OFF SITE. 1600			
Field Personnel C. Scott Brown Luke Chmielecki Signature				
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Field Personnel C. Scott Brown Luke Chmielecki Signature			_	
	11.00	6	2	
	-	11 - 11		
				1
	Field Personnal	C Scott Proum	Luka Chmiologlei	Cionatura
	i icid i cisoillici	None agrants A. Juris of the Control	Luke Chillelecki	Signature



DAILY FIELD REPORT CALIBRATION RECORD

LEA Comm. No. Project Location Client	88UT907.001 UTC P&W Will P&W East Harts Pratt & Whitney	ford, East Hartf	ord, CT					Page 3 of 14 Date 3 /10 /09
pH Meter/Serial # 9	9K0055AB/05	F1549 /0100	979 A A					
	/	Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO %
Initial Calibration		0800	/	~	V	/	/	100.0/100.1/99
Calibration Check								
Calibration Check								
Turbidity Meter/Seri	al # 3522/To	786/3521 Time		20 NEW	100 NTM	000 NITT I		
Initial Calibration			0 NTU	20 NTU	100 NTU	800 NTU		
Calibration Check		0000						
Calibration Check								
PID Meter/Serial #	3053							
		Time	Standard	Meter Reading	Zero with			
Initial Calibration		0800	100	100	Background			
Calibration Check								
Calibration Check								
Balance/Serial #								
		Time	Standard	Balance				
Initial Calibration								
Calibration Check								
Calibration Check	/ -		_					
Comments	11							
Field Personnel	C. Scott Brown		Luke Chmielecki	i			Signature	
	Nate Emmons						1	



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

LEA Comm. I Project Location Client	No. 88UT907.0 UTC P&W P&W East I Pratt & Wh	Willowpo Hartford, l	East Hartf	ord, CT	Mon.		ge 4 of 14 ate 3 /10 / 09
Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
1117662	Trip	1200	BKT	-			
1117663	Trip Equipment	1200	BKE			<u> </u>	
			Q				
				400.00			
Field Personnel	C. Scott Bro			Luke C	Chmielecki	Signature	20



FIELD SAMPLING RECORD

MONITORING WELL INVENTORY

Field Personnel	C. Scott Brow Nate Emmons			Luke	Chmielec	KI		Signature	2
N. IJ D.	C C			Lade	Chm!ala	lei		Cianatura	
2231965	UNIDENTIFIED	/	1	/	11.70	9.91	0.0	/	de:
2231964	WT-MW-40				17.60	11.70	0.0	1	
231963	WT-MW-41				9.51	4.73	0.0	8	
2231962	WT-MW-42				9.33	3.85	0.0		
2231961	WT-MW-50				5.23	1.81	0.0	1.90	
2231960	WT-MW-43				11.80	7.18	0.0	/	
2231959	STAFF				NM	3.53	NM		
2231958	WT-MW-195R	0	(4)	40	12.10	9.90	0.0		
2231957	WT-MW-44	4	6	1	13.50	8.84	0.0		1
2231956	WT-MW-59		1		17.60	11.61	0.0	(F)	4
2231955	WT-MW-58				17.55	10.95	0.0	1	
2231954	WT-MW-57				18.00	10.65	0.0		
2231953	WT-MW-48				7.50	4.10	0.0		
2231952	WT-MW-45				13.60	7.98	0.0		
2231951	WT-MW-49				7.50	2.35	0-0	3.20	
2231950	WT-MW-46				12.55	5.64	0.0	000	
2231949	WT-MW-47	1	1	1	14.30	8.33	0,0	/	1
Sample ID	Location ID	Time	Predicte of Well	ed Depth to Water	Actual of Well	Depth to Water	PID/FID	Reference Elevation	Comments
Client	Pratt & Whitr	ey Divi	sion - JTo	ot					
ocation	P&W East Ha	artford, l	East Hart	ford, CT					
roject	. 88UT907.001 UTC P&W W		nd Quart	erly GW	Mon.				Date 3 /10/09
									Page 5 of 14



LEA Comm. Project Location	Į F	&W Eas	W Willow t Hartford	pond Quar d, East Har	tford, CT						Date	6 of 14 e 3 /10 / 09 le Time 10:
Client				ivision - JT				- California				
Monitoring	Well Nu	mber h	17-MW	34	Samp	le Numbe	er(s) 1117	644		11 76	440	7
nitial Field I Depth of We Depth to Wa Height of Co Well Casing Protector Ground to R Comments	ll / ter lumn / Diameter	7.40 7.14 .6 Z 		Reference PID/FID F Interface Materia		Jou O.O Yes KN Pu		Casing Collar Cover	Conditions Secure Intact Locked (describe		Lig OK X	chter / Heavie Bad
evelopment		ation		y 1				yı				
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turb (NT		Comment
9:10	_	300	100	<u> </u>	_	Start	Purpy	-		7		
9:20	-	300	100	1.02	7.84	614	7.38	165.4		6.1	-	
9.30	-	300	100	2.01	8.60	619	100	168.5	3.14	3.6		
9.40	~	300	100	3.02		623		172.6	3.01	3.1		
9.50	-	300	100	4.02	5.41	629	7.18		2.87	3.1		
10.00	_	300	100	5.02	8.44		7.16	180.3		3.0		
10.05	_	300	100	5.5 L	8.40	636		182.7		3.4		
10.10	_	300	100	6.06	8.43	641		1873		3.0	1	Sample
		W			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,							
				1								
				1/1						-		
				-	1		-			-		
Developemer	at Mathe	d Danier	Itia D.	N/ Dail/	Inortial D	h.m. / O.	hor		1			
Sample Field	200	nt If any alique	ambigui	ty could ex e approprie	ist, be sui	re to indi	cate the f					
Field Deconta Waste Contai	iner ID	n? Ye	307	If Yes,	with what							
dditional C	omments	Not	16h ;	to theak	water	- here	.I duc	10	d'an	ter	07	will
eld Personne	_	C. Scott B			Luke	Chmiele	cki			ature		x-



LEA Comm. Project Location Client	L P	&W Eas	W Willow st Hartford	pond Quar l, East Hart vision - JT	ford, CT					Da	e 7 of 10 te 3 /10 / 09 ple Time 10:
Monitoring						e Numbe	er(s) 1117	649		1117649	r of
Depth of Wel Depth to Wat Height of Con Well Casing Protector Ground to R Comments	ll ter lumn Diameter Road	7.50 4.10 3.40 2'' Box/St	ickup	Reference PID/FID F Interface Materia		Yes / No		Casing Collar Cover	Condition Secure	on OF	1
evelopment	Informa	tion									
Parameter		Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0935	4.10	300	100	0	_		6	2	_		Start .
0945	i	1	i	1	4.91	384	6.86	-93.5	0.61	73.1	
0955				2	5,32	420	6.74	-111.2	0.42	40.0	
1005	4	(4)	0	3	5.08	384	6.75	-72.8	2.33	19.9	9
1015				4	5.48	423	6.70	-87.0	1-52	4.96	
1025	- V	4		5	5.64	434		-92.9	1.43	4.71	/
1035	4.10	300	100	6	5.60	429	6.71	-89.6	1.47	4.63	Sampled
					(60)						
							_				
				,							
Developemen	t Method	Perista	altic Pump	/Bailer/	Inertial P	ump / Otl	her _				
Sample Field Field Deconta		alique the C		appropria stody!		in the sar					
Vaste Contain		707	307								
eld Personnel	l <u>C</u>	Scott B	rown		Luke	Chmiele	cki		Sign	ature	



LEA Comm. No. Project	88UT907 UTC P&		pond Quar	terly GW	Mon.					te 3 / 16 / 69
Location Client	P&W Eas	st Hartford	l, East Har ivision - JT	tford, CT					Sam	ple Time 10:4
Monitoring Wel	1 Number L	л- MU	N-44	Samp	le Numb	er(s) 1117	7646		117646	5 U F
Depth to Water Height of Column Well Casing Diam	13.53 meter / Road Box / St	5	Reference PID/FID I Interface Materia	Used Reading	Yes/N	3 If ye	Collar Cover	Conditions Secure Intact Locked (describe	V	ighter / Heavier
Development Info	ormation	1			1-2-3		1		,	
Time Wa	oth to Pump ater Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)		ORP (Eh)	(mg/L)	Turbidity (NTU)	Comment
9:30 9:50 10:80 10:30 10:35 10:35 10:45 50mpl	300	\doldo	\$\limes 1.0 3.0 4.0 5.0 6.0 7.0 7.5 8.0 8.5	10.78 10.80 10.82 10.84 10.84 11.01 10.98 16.96	510 529 527 523 523 524 524	6.10 6.13 6.14 6.14 6.14	283.6 288 .9 240.3 241.9	8.25 9.91 10.36 10.91 12.14 11.96	5,98 5,01 4,76 4,50 3,66 3,31 3,25 3,20 3,15	
			A	Pate						
Developement Me	ethod Perista	altic Pumr	/ Bailer /	Inertial P	ump / Ot	her				
Sample Field Trea	atment If any alique	ambiguit	y could exi	st, be sur	e to indicing the sai	cate the f mple ID c	on both th	e sample		
Field Decontamina Waste Container I		s / No 307	If Yes, v	vith what	? <u>u</u>	14I -	- Me	th		
Additional Comm	ents									
Field Personnel	C. Scott B			Luke	Chmiele	cki		Sign	glure als Elm	vous



CEA Comm. Project Location Client	Ų P	&W Eas	W Willow st Hartford	pond Quar d, East Har ivision - JT	tford, CT			*		Dat	e 9 of 1 e 3 / 10 / 0 ole Time 12 :
Monitoring						le Numbe	er(s) 1117	650		1117650	ouf
Depth of We Depth to Wa Height of Co Well Casing Protector Ground to R Comments	ell hter blumn Diameter Road	13.60 7.98 5.62 1/2 Box/St		Reference PID/FID I Interface Materia		Yes/Ne	o If ye	Casing Collar Cover	Condition g Secure Intact Locked (describe	on OK	
evelopmen	Informa	ition									
Paramete	1	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1155	7.98	300	100	0			(9			Start
1205		1	i	ı	9.93	457	6.45	-92.9	0.44	2.00	/
1215	4	(1)	40	2	10.01	494		-94.8	0.35	1.61	Ø
1225	1	1	1	3	10.17	506	6.42	-96.6	0.31	1.44	
1235	7.98	300	100	4	10.09	499	6.42	-95.7	0.32	1.33	Sampled
				_	(a)						
									_		
Developemer Sample Field		nt If any alique	ambiguii	y could exi e appropria	st, be sur	e to indi	cate the f				
ield Deconta Vaste Contai dditional C	iner ID	? Ye	s No		vith what	?					
eld Personne	-	. Scott B	CAST CONTRACT CONTRAC		Luke	Chmiele	cki		Sign	ature	·



LEA Comm. Project Location Client		P&W Eas	W Willow st Hartford	pond Quar l, East Har ivision - JT	tford, CT					Da	te 10 of 14 te 3 /20/09 ple Time 1/2; 4
Monitoring	Well Nu	imber 6	JT-MU	42	Samp	le Numbe	er(s) 1117	7645	1	117643	v f
Initial Field I Depth of We Depth to Wat Height of Con Well Casing Protector Ground to R Comments	ter 9 lumn Diamete	5-83 9. 33 3 34 5. 1 05 BOX St	33 85 48	Reference PID/FID I Interface Materia		Yes /M) If ye	Casing Collar Cover	Conditions Secure Intact Locked (describe	on Ol	
Development	Inform	ation									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	A 17 A	ORP (Eh)	(mg/L)	Turbidity (NTU)	Comment
11:30	_	600	100	<u></u>	_	5+0-1		4 -	>		
11.40	1	300	100	1.02	8.97	310	5.91	167.5	4.61	27.7	
11.50	~	300	100	2.02	8.90	300	581	195.8	3.44	16.1	
12.00	_	300	100	3.02	8.96	288	5.84	2/2.6		12.5	
12.10	_	300	166	4.02	9.01	272	5.86	220.6	3./3	6.06	-
12.20	_	300	100	5.01	9.00	259	5.90	229.1	2.99	3.12	
12.30	-	300	100	6.56	9.02 9.00	250	5.93	236.5	2.71	3.01	
12.53	3	306	100	2.06	9.01		5.91	247.6		7.60	
12.42	J	300	,00	7.52	9.04	240	5.92	251.3	7.53	2.44	Samph
		>	12								
		_									
						/					
Developemen	t Method	d Perista	altic Pump	/ Bailer /	Inertial P	ump / Ot	her				
Sample Field Field Deconta		alique the C	ot with the hain of Ci	approprio ustody!	ate suffix	in the sai					
Waste Contain	ner ID	707	2307		with what		,				
Additional Co								+ - N	6+ AL	sh)	to
ield Personnel		C. Scott B			Luke	Chmiele	cki			ature	A. 2



ent Monitoring				vision - JT		le Numbe	er(c) 1117	1647		117/ 11	- D
Nontrolling	W CII IVUI	noci 🔼	J W	W- 11	Samp	ic ivuillo	1(5) 1117	047		11764	10+
itial Field I bepth of We bepth to War leight of Co lell Casing Protector Ground to R Comments	ll ter 2 lumn Diameter Road	1.50 1.35	11	Reference PID/FID F Interface Materia	Reading	Yes/Q		Casing Collar Cover	Conditions; Secure Intact Locked (describe	on OK	ghter / Heavi
evelopment	Informa	tion									1 1
Parameter Time		Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:45 11:55 12:05 12:15 12:25 12:35 12:45 12:50 12:55 Sample	2.35 2. 5 9 2.72 2.89 3.21 3.29 3.31 3.31	300 V	100	1 2 3 4 5 6 6.5 7	8,91 8,96 9,13 9,19 8,98 8,97 8,98	404 400 402 404 407 405 404 404		257.7 162.0 103.1 72.0 52.7 48.5 48.0 49.1	6.65 3.89 2.88 2.89 2.90 2.90	10.2 6.44 4.25 3.70 2.80 2.75 2.60 2.57	Pumping
	. 26 / 1	*	Li D	\(\n, \n, \cdot\)		100					
evelopemen ample Field eld Deconta aste Contai	Treatment amination ner ID	alique the C	ambiguit ot with the hain of Ci	y could ext approprioustody!	ist, be sur	e to indicin the sar	cate the fi	n both th			



Project Cocation	L P	&W Eas	W Willow st Hartford	pond Quar l, East Hart ivision - JT	tford, CT					Dat	e 12 of 1 te 3 /10 / 0 ole Time 14 :
Monitoring	Well Nur	mber y	VT-MW-	47	Samp	le Numbe	er(s) 1117	651		1117651	of
Depth of We Depth to Wa Height of Co Well Casing Protector Ground to R Comments	ter lumn Diameter Koad	14.30 8.33 5.97 ½" Box/St		Reference PID/FID F Interface Materia	Reading			Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	
Development		tion							,		
Parameter	Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1320	8.33	300	100	٥	_			9			Start
1330				1	11.49	350	5.55	190.6	5.35	3.49	
1340	(4)	0	4	2	11.39	342	5.58	189.9		2.96	Ø
1350	1	↓	1	3	11.30	334	5.61	189.4		2.44	/
1400	8.33	300	100	4	11.33	337	5.60	189.5	4.91	2.30	Sampled
					6						
Developemen	t Method	Derist	altic Pumr	/ Railer / 1	Inertial P	ump / Otl	her				
Sample Field Field Deconta	Treatmen	alique the Co	ambiguit ot with the hain of Ci	y could exi appropria ustody!	st, be sur	e to indic in the san	cate the fi				
dditional Co	omments		1367								
eld Personne		Scott B			Luke	Chmieleo	cki		Sign	ature) e



LEA Comm. No. Project Location Client	UTC I P&W	907.001 P&W Willow East Hartford Whitney D	d, East Har	tford, CT					Dat	e 13 of 14 e 3/10/09 ble Time 14:
Monitoring Wel	l Number	WT- W	1W-76	Samp	e Numbe	er(s) 1117	7648		1117649	30f
Depth of Well Depth to Water Height of Column Well Casing Dian Protector Ground to Refere Comments	12. 5. neter	55 64 <i>y</i> 2 ¹¹ Stickup	Interface Materia	Reading	Yes N	of C If ye	General Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	ghter / Heavier
Development Info	ormation									
Time W	th to Pun ater Setti		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
13:35 50 13:55 13:05 13:10 14:15 14:25 5ample—	04 300	000	3 4 45 6 6.5	10.16 10.11 10.12 10.12 10.12	139 139 137 137 137 137	6.07	203.5 239.7 241.7 243.5 243.1 243.0	6.86	1.05	Pumping
Developement Me Sample Field Trea Field Decontamin Waste Container I	atment If all the ation?		ty could ext e approprio ustody!	ist, be sur	e to indici in the sai	cate the f	on both th	e sample	bottle lab	
udditional Comm	ents U _v	hable +	to Con	tinuousl	y moi	nitor u	vater le	evel A	Secause	af
ield Personnel	C. Scot	t Brown nmons		Luke	Chmiele	cki		Sign	ature En	uu TaS



LEA Comm. No Project Location Client	J F	&W Eas	W Willow	pond Quar d, East Har ivision - JT	ford, CT	(our	A)			Da	te 14 of 19th
Monitoring '	Well Nu	mber 4	JAW	-47 V	T-NW-	le Numbe	er(s) 1117	643		11176	43vf
Depth of Wel Depth to Wate Height of Col Well Casing I Protector Ground to Re Comments	l er 'umn Diameter Road	9.5 4.7 4.7 0.8 Box St) 5 *	Reference PID/FID F Interface Materia	Reading	Yes /®	b If ye	Casing Collar Cover	Conditions Secure Intact Locked (describe	on Ol	3
Development		ation									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
13.50	_	300	100	<u></u>		Stat					
14.00	-	3 00	100	1.06	8.53	430	7.86	148.6	4.15	7.12	
1410	-	300	100	z.0L	8.60	433		155.3	4.07	5.99	
14.20	-	300	100	3.02	8.63	442		168.7	3.66	5.03	
14.30	-	300	100	4.02	8.61	447		175.5	3.01	4.76	
14.35	_	300	100	4.56	8.64	451		179.9	2.87	4.25	
14.40	-	300	100	5.0L	863	733	7.09	184.8	2.60	3,89	1
14.43		300	100	5.56	6.65	458	7.09	188,1	2.49	3.15	Sh-plal
	7										
					1000						
				1							-
							-				-
			-		1						-
Developement	t Mothor	Doriet	Itic Dum	DRailer /	Inertial D	ump / Ot	hor		L		
		_		-						1. 1.	
Sample Field	1 reatme	aliqu		e approprio							
Field Deconta Waste Contair			7307	If Yes, v	with what	?					
Additional Co	mments	3									
ield Personnel	-	Scott B			Luke	Chmiele	cki		Sign	ature	<i>P</i>



MARLBOROUGH, MA 01752

ACCUTEST JOB #:	
ACCUTEST QUOTE #:	

	Laborato	E 10 11 122 124			100000000000000000000000000000000000000	08-481-620			100	31-7	753		Personal Property and Property							453	3	
CHARLES !	CLIENT INFO	RMATION			FAC	ILITY INFO	DRMAT	TION				8			AN	ALYTIC	AL IN	FORM/	AT:ON			MATRIX CODES
	Rabin N	STATE 1. Kinney	ZIP PROJ	ECT N	580	T907		_				_			RCRAY, + CUM. Zn	100.5		0,21				DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST				СО	LLECTION		XIX	LES	PR	ESE	RVATI	ON	877	TPH	1	09						SOLID
SAMPLE #	FIELD ID / P	OINT OF COLLECTI	ON DAT	ΓE	TIME	SAMPLED BY:	MATRIX	#0 TTO8	HC	HN03	HZSO4 NONE	7	0	FI	Mr. ta	27.5						LAB USE ONLY
/	1117643		3/10	109	14.45	4513	CW	4				X	×	×								
1	11176430	, f			14.45	2513	6W	1			\prod	X			Х							
1	1117643	-			14.45	4513	GW	7.	X			X				X						
1	117644				12.45	45/8	GW	4				1	×	×								
,	117644Vt	0			12.45	CSB	60	1				1			×							
j.	1117644		1 /		12.45	C5/3	600	Z	×			1				Х						
1	1117645		,		10:13	LSB	bw	4	П			×	x	X								#
-1	111764501	7			10:15	4513	lin	1				X			χ							
1	1117645			C	10.15		bw	Z	X			X				X						
<u></u>										1												
1					1 E 1												1-					
	DATA TURNAROUN	ID INFORMATION			DATA DEI	IVERABL	E INF	ORM	ATIO	N		SILVE			SIG		COL	MENT	S/RE	MARKS	3	
☐ 7 DAYS ☐ 48 HOUF ☐ OTHER 14 DAY TURN	REMERGENCY	. EMERGENCY OR RU		ISK D	ERCIAL "I DELIVERAL FORMS R (SPECIF	BLE										TRO			37	(4)	<i>b's</i> †	
		SAMPLE CUSTODY		MENT	ED BELOW					HAN	IGE P	_			CLUC			Contract Con	VERY			
1.	BY SAMPLER:	3/10/09	1. Q	11/		2.	NQUISH	ED BY:				D	ATE TI	ME:		RECE	IVED BY:					1 2 2 1
RELINQUISHED	vBY:	DATE TIME:	RECEIVED BY:			RELI	NQUISH	ED BY				D	ATE TI	ME:		RECE	IVED BY	:				
RELINQUISHED	BY:	DATE TIME:	RECEIVED BY:			SEAL		_					P	RESEF	VE W	HERE APP	PLICABL	E		ON ICE		TEMPERATURE



2 054 CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

MARLBOROUGH, MA 01752

ACCUTEST JOB #:	
ACCUTEST QUOTE #:	

	Laborate				TEL: 508					31-//	53				_					009-45	}
	CLIENT INFO	RMATION			FACIL	TY INFO	DRMA	TION		May	STEP I	100			ANA	LYTICA	L INFO	ORMAT	TIÓN		MATRIX CODES
CITY,	LEA Northwest Inville In McKinney 60-747-6181	STATE 04	ZIP	PROJECT I	881 NO.	00 Q EH, C 07907	T .001						8260 B	Ы	8082	8 + Cu, NI, 20					DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
ACCUTEST SAMPLE #	FIELD ID / P	OINT OF COLLECT	ION		LLECTION	AMPLED	MATRIX	# OF BOTTLES			RVATIO		500	LT ETPH	W	PA					
OAMI LL #				DATE	TIME	BY:	ž	90	¥ }	Ž	H2SO4	CE	700	5	PCB	8CE					LAB USE ONLY
J	111764	19		3-10-09	1035	LC	6W	2	X			Х	X								
J	111764	19		1	1035	1	1	4				X		Х	X						
1	111761				1035			1	П	×		Х				X					
1	111765				1235		I	2	x	1		Х	Х								
J	111765				1235			4				Х		x	x						
1	11176:			0	1235	0	0	1	\Box	y		X		-		×					
11	11176:			1	1400		1	2	¥	1	\vdash	X	X	\exists			T	\top	+		
,	11176				1400	+	H	4		$^{+}$		1	^	×	х		+	_	+		THE THE P. P. A.
1	11176				1400	1	\dagger	1	T	v	\top	X				Х	\Box		T		
,	11176				1200	1	1	12	J	1	\dagger	X.	Х			^	11	+	+		
1				V			,	-		+		\top	^				+	\top	1		
	11176			3-10-09	OWNERS AND DESIGNATION OF THE PERSON OF THE	LC	GW			_		X		Х	X						
		ID INFORMATION		Service All	DATA DELI	/ERABL	E INF	ORM	ATIO	V							COM	MENTS	S/REM	ARKS	
7 DAYS 48 HOUR OTHER 14 DAY TURNAL	RUSH EMERGENCY	. EMERGENCY OR RU		☐ DISK [IERCIAL "B" DELIVERABI	.E					_		Pc.	e c	T .	RIP A	nolyti Prep	eal li	sł	£	
BONS B		SAMPLE CUSTODY		and the second	ED BELOW E					HAN	GE PC		_		LUD			DELIV	ERY	D. L.	
RELINQUISHED B	Y SAMPLER:	3-10-09	1.12	BY		RELIN	NQUISH	ED BY:				DA	TE TIM	AE:		RECEIV	/ED BY:				
RELINQUISHED B	IY:	DATE TIME:	RECEIVED	ву:		RELIN	NQUISH	ED BY:				DA	TE TIM	AE:		RECEN	/ED BY:				
3. RELINQUISHED B		DATE TIME:	3.	RV.		4.						_		DECE	VE WE	4.	ICARI F			ON ICE	Tepposyupe
5.		JAIL HME.	5.	O1:	iF	SEAL							179	HESER	VE WH	ERE APPI	JUABLE			ON ICE	MPERATURE



of 4

CHAIN OF CUSTODY

195 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:	91	
ACCUTEST QUOTE #:		
ACCUTEST QUOTE #:		
V 22 /	2009-453	

	CLIENT INFO	RMATION			FAC	ILITY INFO	ORMA	TION	Tit.		3 9	RE			ANALYTIC	AL INF	ORMATION		MATRIX CODES
SEND REPURT	LEA OO Northwest lainville Sobia McKinner OO:			PROJECT N	9	Pend G WEH, C 8UT90	T		GW				82608	* Cv, Ni, Z ~					DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST				co	LLECTION		×	S	PRE	SER	VATI	ON		00					SOLID
SAMPLE #	FIELD ID / P	OINT OF COLLEC	TION	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	NACH HCI	HNO3	H2SO4	1CE	2007	RCRA RCRA					LAB USE ONLY
4	111766	3.4		3-10-09	1200	h C	GW	1		X		X		Х					
/	111760			3-10-09	1200	LC	GW	1	Х			χ	Х						
									$^{+}$	Н	\top	Н		1					
									+	+	-	H			+	+			
194									+							+		5	
									1										
						-	-		+	+		\vdash			-	+			-
										L									
	DATA TURNAROUN					LIVERABL	E INF	ORMA	TION				125			COM	MENTS/REM	IARKS	The source of the
14 DAYS	S RUSH	APPROVED B			ERCIAL "								11:	se c	T RCP	analyt	tical list		-
☐ 48 HOUI	R EMERGENCY			☐ STATE									20	ovid	e CT RC	PPe	port list		
	AROUND HARDCOPY S PREVIOUSLY APPR		RUSH IS FAX	□ OTHER	(SPECIF	Ψ)							-						
		SAMPLE CUSTOR			D BELOW				S CI	IANG	E PC								
1.	BY SAMPLER:	3-10-09	1. A	11.	>	2.	NQUISH	ED BY:				0,	TE TII	MC:	2.	IVED BY:			
RELINQUISHED 3.	And the second second	DATE TIME:	RECEIVED B	Y:			NQUISH	ED BY:				DA	ATE TH	ME:		IVED BY:			
RELINQUISHED	DBY:	DATE TIME:	RECEIVED B	Y:		SEA	. •			/ 3			P	RESER	VE WHERE APP	LICABLE		ON ICE	EMPERATURE C



MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

ACCUIT	ECT	IOD	4.
ACCUT	E91	JOB	**

CCUTEST QUOTE #:			
KRO/	2000 -	- 453	

	CLIENT INFORMATION		AL ALERT	FACI	LITY INF	ORMA	TION			TO VI	I		7	AN	ALYT	CAL I	NFORM	IAT:C	N		MATRIX CODES
	LEA OF Northwest STATE OF RODIN MC KINNEY 86)r 21P 06062 01,47-6181	PROJECT I	EAST	YUT	90°	7		oni lo		-	37.5	6 ACRA 87 Ca, W. In	ETPH	Bs						DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
SAMPLE #	FIELDHO / POINT OF CO	DLLECTION	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	HCIN	HNO3	NONE	TRE	Š,	Moto	U	8						LAB USE ONLY
J	1117646		3/10/09	10:45	NE	6W	6	X		Х	Х	X		×	X						
1	1117646 05		' '	10:45			1		X		X		V								
1	1117647			12:55			6	X		X	X	X		X	X						
1	1117/47 1	2		12:55			1		X		X		X								
15	1117648			14:75	11	V	10	V		X	X	V		X	V						
1	1117648 0	0		14:15		GW)	1		X		V				^						
	11116780	T		14 - 1	NE	1610	+	H	1	\top	$^{\wedge}$	\dashv	^			\top	\top				
. 16							-	+	++	+	+	+				-			1		
						\vdash	\vdash	\vdash	+	+	+	+	\dashv		-	+	+		\rightarrow	-	1
						-	-	\vdash	+	+	+	+	\dashv		\dashv	-	+	-	-	-	1
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							-														· · · · · · · · · · · · · · · · · · ·
	DATA TURNAROUND INFORMA	ATION		DATA DEL	.IVERABL	E INF	ORMA	TION	V							C	MMEN	TS/R	ЕМА	RKS	
☐ 7 DAYS ☐ 48 HOUF ☐ OTHER 14 DAY TURN	S STANDARD APPROVED APPROVED APPROVED APPROVED		☐ DISK D	PARD ERCIAL "E PELIVERAL FORMS R (SPECIF)	BLE							_		SE						ytical	L _i st
RELINQUISHED		USTODY MUST BE		ED BELOW		ME SA			HANGE	E POS		SION		LUC	_	COURII		IVER	Y	Charles I	
1. 1/00/1	Survey 15:301	3/10/00 1. Br	Must/		2.										2.						
RELINQUISHED 3.	BY: DATE TIME:	3.	BY: "[4.	NQUISH	ED BY:				DAT	E TIM	E:		4.	CEIVED E	Y:				
RELINQUISHED 5.	BY: DATE TIME:	10.00	BY:		SEA	Le					- 6	PR	ESER	VE WI	IERE A	PPLICAE	LE			I ICE	EMPERATURE C
-							_	-	-		_	_	_		_			-			



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

LEA Comm. No. 88UT907.001						Page _1 _ of _10
Project UTC P&W W	/illowpond	Quarterly GW	V Mc	on.		Date 3 / 11 / 09
Location P&W East Ha						
Client Pratt & White	ney Division	- JTot				
Arrived at Site 0300 Site Activities	Departed f	rom Site	160		cle 3 Personals neter (Start)	60 miles each R Return
Soil Sampling	Geoprobe	e Work		Current P	roject Information	
✓ Groundwater Sampling	Concrete	Coring		Last San	nple Number Used	
Surface Water Sampling	Construc	tion		Last Loc	ation ID Used	- 68
Vapor/Air Sampling	Waste M	anagement		Current l	Location (if not complete)) /
Concrete Sampling				Sampling	g for	see chains
Other Sampling	Inspectio			Laborato	ries used	Accutest
Other Sampling	Site Wall	k Over			rk & Equipment left at/in	office
	Surveyin	g		Site Con	tact	RLM
Well Development	Other (D	escribe)		Contract	ors on Site	LEA
Non-productive Time						
None	Weather			Time and	i place to meet contractor	s O
Equipment Breakdown	Missing l	Equipment				
Late	Other (De	escribe)				,
Quality Assurance Checks				Residuals Dispo	osition	
Yes N/A No				Item	Approx. Amount	Container ID
✓ Sample labels complete				Soil/Solid		9
Sample/cooler seals OK				Groundwater	10 Gal.	707307
✓ All samples obtained				Decon Fluid	0.18	
✓ Chains of custody				PPE	-	9
✓ All forms/logs complete				Other		
Site condition OK	Weather	Conditions				
Site H&S Plan on site	Tempera	ature 40°	e	Precipitation	rain Wir	nd 5-10 mph
✓ Instruments calibrated	Comme	nts				,
Checked By					7	-
//					9	
Robin McKinney	_ _					
			Tex			
Expendable Items Used		Iran	-	ipment Used		henre i
Qty Item		LEA Number	Qty			LEA Number
Bailer, Disposable (specify size)		090	-	Generator 3500		153
Decontamination Supplies Drum, Closed Top 55 Gallon		081 086	-	Meter, Conducti Meter, pH/Temp		022 021
Filter, In Line		024	2		mall Tools & Equipment	
The second secon		060	-	Pump, Grundfos		073
Miscellaneous Health & Safety Items Tubing, 1/2", NOS 1/4" foly		007	3		c (spec. Master or Isco)	040
Tubing, 3/8", NOS		008		Pump, Submersi	ble	201
Water, Distilled		025		Pump, Watera		038
				Thermo-Anemor	meter	248
			3	Turbidimeter		023
		-	Įį.	Water Level Indi	Photovac 2020 (PID)	012 028
		-	3	YSI CREAT		028
			3	131 00074	<i></i>	
			-			
Field Personnel C. Scott Brown	n	Luke	Chr	nielecki	Signati	ure/
Nate Emmons						ure/ Ze



DAILY FIELD REPORT

Supplemental Sheet

LEA Comm. No.	88UT907.001		Page 2 of 10 Date 3 / 11 / 09
Project	UTC P&W Willowpond C	Quarterly GW Mon.	Date 3 / 11 / 09
Location	P&W East Hartford, East	Hartford, CT	
Client	Pratt & Whitney Division	- JTot	
Description of Si			
0800 on site.			
Cal'd equipmen Discussed H+S	4.		
Discussed H+S			
Began monitori	N4 .		
Scott fixing	Jell covers.		
Scott Doing	spection.		
Began monterion Scott Fixing Scott Doing 10 Waste 1500 Sample Pickup. Offsite 1600			
Sample Pickup.	1530		
offs: te. 1600			
(
	\		
		\	
		_	
			V.
Field Personnel	C. Scott Brown	Luke Chmielecki	Signature
	ware emmons		



DAILY FIELD REPORT CALIBRATION RECORD

LEA Comm. No. Project Location Client	88UT907.001 UTC P&W Will P&W East Hartf Pratt & Whitney	ord, East Hartfo Division - JTot	ord, CT					Page 3 of 10 Date 3 /11 /09
pH Meter/Serial #	99KOOSSAB/OS	F1549/01C097	9AA					
	,	Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO %
Initial Calibration	-	0800	/	-	~	~	/	100.2/99.8/99.9
Calibration Check								
Calibration Check	_		721					
Turbidity Meter/Seri	ial # 3522/To	P.B6/3521 Time	0 NTU	20 NTU	100 NTU	800 NTU		
Initial Calibration		0800	/	~	/	~		
Calibration Check	-	0300						
Calibration Check	-							
PID Meter/Serial #	3053							
		Time	Standard	Meter Reading	Zero with			
Initial Calibration		0800	100	100	Background			
Calibration Check					J			
Calibration Check								
Balance/Serial #								
		Time	Standard	Balance				
Initial Calibration								
Calibration Check			<i>d</i>					
Calibration Check	/ _							
Comments								
Field Personnel	C. Scott Brown Nate Emmons		Luke Chmieleck	i			Signature	an



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

LEA Comm. Project Location Client	UTC P&W	Willowpo Hartford, l	East Hartf	ord, CT	Mon.	Page Date	4 of 10 2 3/11/09
Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
1117660	Trip	1200	BKT	d	Ø	- W	
1117661	WT-MW-50	1005	DUP		0.0	Duplicate of 1117655	707307
			14				
7			®				
Section 1000							
Field Personne	C. Scott Bro		*	Luke C	Chmielecki	Signature	



LEA Comm. I Project Location	U P	&W Eas	W Willow st Hartford	pond Quar d, East Har	tford, CT					Da	e <u>5</u> of te <u>3 / 11 / 0</u> ple Time <u>10</u>
Client	P	ratt & V	Vhitney D	ivision - JT	`ot						
Monitoring	Well Nur	mber <u>v</u>	VT-MW	-50	Samp	le Numbe	er(s) 1117	7655		1117655	of
Initial Field I	Data and	Measu	rements				[[]	661		1117661	of
Depth of Wel	11	5.23	0.014.04.04.04.04.04.04.04.04.04.04.04.04.04	Reference	Used	TOR					
Depth to Wat				PID/FID I							
Height of Co.				Interface		Yes / N	o If ye	s, Depth		Li	ghter / Heavi
Well Casing	Diameter	7"		Materia	l PVC			General	Condition	on Ok	Bad
Protector	Road	Box / 81	ickup						g Secure	1	
Ground to R	eference								Intact	V	
Comments								Cover	Locked	/	
								Other	(describe	e)	
Development	Informa	tion									
Parameter	Depth to Water	Pump Setting RPM	Purge Rate (mL/min)	Cum, Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0915	1.81	300	100	0			-	9			Start
0925	1	i	1	i	8.81	2717	6.83	-136.0	0.65	16.5	/
0935	0	60	0	3	9.15	2855		-147.8		9.92	ch
0945	(Up	90	9	3	9.38	2904		-152.5		4.88	1
0955	4	1		4	9.41	2931	6.84	-148.6	0.38	4.12	/
1005	1.81	300	100	5	9.38	2927	6.85	-150.2	0-42	3.44	Sampled
										-	
			-								
-		_					-				
					1						
Developemen	t Method	Perista	altic Punip	/ Bailer /	Inertial P	ump / Ot	her				
Sample Field	Treatmen	alique	ot with the	appropria							
Field Deconta Waste Contair		? Ye	s (No)	If Yes, v	with what	?					
Additional Co	mments	Duplic	ate Sar	uple Tak	.en						
ield Personnel		Scott B			Luke	Chmiele	cki		Sign	ature	20



LEA Comm.	No. 8	88UT907	.001							Pag	e 6 of 10
Project	Ţ	JTC P&	W Willow	pond Quar	terly GW	Mon.					te 3/11/09
Location	F	&W Eas	st Hartford	l, East Har	tford, CT						ple Time /0 :5:
Client	F	ratt & W	/hitney Di	ivision - JT	ot					-2-7-11-2	
Monitoring	Well Nu	mber 1	VT-ML	u- 5 7	Samp	le Numbe	er(s) 1117	7652	-	11176.	52 Uf
Initial Field l			rements				1				
Depth of We	11	17.9	0	Reference	Used		of C				
Depth to War	ter	10.72		PID/FID F	Reading	•					
Height of Co.	lumn			Interface		Yes N	If ye	s, Depth		Li	ighter / Heavier
Well Casing	Diameter	ŕ	13	Materia	1 PV	C			Conditio		K Bad
Protector	Read	Box/St	ickup						Secure	-	
Ground to R									Intact	V	,
Comments				-					Locked	V	
									(describe	(e)	
Development	Informs	ation							***************************************		
Parameter		1	B B			Spec.					
Time	Depth to Water	Pump Setting	(mL/min)	Cum. Liters Purged (L)	Temp (C)	Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
9:00	10.72	300	100	-							Purging
	10.87	1	1	2	11.38	3371	6.00	145.7	3.25		1, 9
9:30	10.91			3	11:35	3100	6.00	134.8	2.60	49.6	
9:40	11.02			4	11:08	2870	6.01	122.5	(.3)	32.4	
	11.07			5	11.07	2815	6.01	119.0	1.20	22.3	
	11.07			6	11.02	2753		115.3	1.16	16.0	
10:10	11.08			7	11.03	2660		111.5	1.04	11.4	
16:20	11.08			8	11.10	2600	6.03	107.0	1.01	7.78	
10:30	11.08			9	11.20	2590	6.04	102.2	.81	5.65	
10:40	11.08			16	11.18	2581	6.04	100.1	.77	3,59	
10:45	11.08			105	11.16	2579	6.05	99.8	.81	3.47	
10:50	11.08	1/	1/	11	11.16	2514	6.04	44.1	189	3.50	
10:55	11.68	V	V	11.5	11.17	2580	6.04	99.7	.80	3.32	
Sample-											
				12							
				(X/2)							
				X							
Davids	t Mother	1 20	Itia Duni	N Doils 1	In out!-1 D	100	how				
Developemen		\sim		550		1					
Sample Field	Treatmen										
				approprio	ite suffix	in the sai	mple ID o	on both th	e sample	e bottle la	bel and on
		-	hain of Cı				/				
Field Deconta Waste Contain		_	SV No 07307	If Yes, v	vith what	? _ N	1eth	on W	LI		
Additional Co	omments	-	0 []								
Field Deserve	1 0	Costt D			TI	Char!-1	alei	AMURAS FEE	0 :-	mdren -	
Field Personne	- Company	. Scott B late Emm			Luke	Chmiele	CKI		Ab	ature W. Enn	wnD



LEA Comm.	No. 8	8UT907	.001							Page	e 7 of 10
Project	J	JTC P&	W Willow	pond Quar	terly GW	Mon.					te 3 /11 /09
Location	P	&W Eas	st Hartford	i, East Hart	tford, CT					Samp	ple Time 12 :3
Client	P	ratt & W	Vhitney Di	ivision - JT	ot						
Monitoring	g Well Nu	mber w	VT-MW.	-40	Samp	le Numbe	er(s) 1117	656		1117650	6uf_
Initial Field	Data and	Measur	rements								
Depth of We	ell	17.60		Reference	Used	TOR					
Depth to Wa		11.70		PID/FID F	Reading						
Height of Co	olumn	5.90		Interface		Yes/No	o If ye	s, Depth		Li	ghter / Heavier
Well Casing	Diameter	1/2"		Materia	1 PVC			General	Conditi	on OK	C Bad
Protector		Box / St	ickup	E.				Casing	Secure	-	
Ground to I		/		-					Intact	-	
Comments								Cover	Locked	-	
								Other	(describe	e)	
Developmen	t Informa	ition									
Paramete		Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1140	11.70	300	100	0		(uisrein)	-	9			Start
1150	1	1	1	1	10.64	3780	6.87	-92.9	0.61	4.96	31011
1200				2	10.68	3784	6.86	-92.3	0.54	3.34	
1210	(4)	(1)	(1)	3	10.74	3797	6.86	-91.2	0.45	2.28	Œ
1220			1	4	10.81	3793	6.86	-97.3	0.38	2.11	
12.30	11.70	300	100	5	10.79	3796	6.86	-92.6	0-41	2.04	Sampled
\											
					(F)						
	-										
-	-										
	-									-	
Developeme	nt Method	Periet	altic Dumar	/ Bailer /	Inertial P	umn / Ot	her				
		-								1. 1.	, ,
Sample Field	Treatmen										
			ot with the hain of Ci	e approprie ustody!	ue sujjix	in the sai	тріе 10 с	on boin in	ie sampi	2 bottle tat	sei ana on
Field Decont	amination	? Ye	es (No)	If Yes, v	with what	?					
Waste Conta	iner ID	7073	107								
Additional C	omments										
Additional C	omments										
Field Personne	el C	. Scott B	rown		Luka	Chmiele	cki		Cion	ature	
icid i cisoilli		ata Emm			Luke	Cimileic	CKI		Sign	ature	>



LEA Comm.		88UT907		1.0							e 8 of 10
Project				pond Quar						Da	te 3 /// / 09
Location				d, East Har						Sam	ole Time <u>13</u> :3
Client	1	ratt & v	vnitney D	ivision - JT	ot						
Monitoring	Well Nu	mber (JT-MU	1-58	Samp	le Numb	er(s) 1117	7653		111765	30F
Initial Field Depth of We				Defenence	Head	۷	- 10				
Depth of We	tor	11100)	Reference	Used		- of				
Depth to Wa Height of Co	olumn	10.01		Interface	ceading	Yes (N) If ye	s, Depth		Li	ghter / Heavier
Well Casing	Diameter	14	5	Materia	1 P1	JC_		General	Conditi	on Ok	Bad
Protector	Road	Box/St	ickup	A STANSAROUS	43.6			Casing	g Secure	L	
Ground to I	Reference			_					Intact	L	
Comments								Cover	Locked	L	/
								Other	(describ	e)	
Developmen	t Informa	ation									
Paramete	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:50	10.87	300	100			(u.s. till)					Purging
12:16	10.84	1	1	2	12,73	1483	6.27	-20.4	0.97	43.90	ruging
12:20	10.89			3		1457		-23.7	0.51	43.90 37.4	
12:30	10.89			4	12.78	1437	6.25	-24.8	0.42	31.7	
12:50	10.89			6	12.83	1396	6.26	-29.8	0.36	16.5	
13:00	10.89			7	12.95	1378	6.27	-322			
13:20	10.89			9				-34.0			
13:25	10.84	11		9.5	12.92	1371	6.28	- 34.1			
13:30	10.89	V	1//		12.93	1370	6.28	-34.0			
13:35	10.89	V	V	10.5	12.93	1370				3.87	
Sample	10.			10.0	10.12	10 10		2710	0.00	3.07	
Sample							-				
1				1							
					Me						
					140						
Developemen	nt Method	l Cerista	altic Pump	/ Bailer /	Inertial P	ump / Ot	her				
Sample Field	Treatmen	aliqu		e appropria							
Field Decont	amination		No No		with what	2					
Waste Conta			307	II 1 es, v	viiii wiiai	,	-				
Additional C	omments										
Field Personne	1 C	. Scott B	Irown		Luke	Chmiele	cki		Sian	ature.	
. Ioid I distille		ate Emn			Luke	Cimilioic	VAI		N	allen C	mmons



Protector Road Box / Stickup Ground to Reference Comments Cover Locked Other (describe) Development Information Parameter Port to Pure Para Com Literal Spec.	ne <u>14</u> :								
Monitoring Well Number WT-MW-19 SR Sample Number(s) 1117657 Initial Field Data and Measurements Depth of Well 12.10 Reference Used ToR Depth to Water 9.90 PID/FID Reading 0.0 Height of Column 2.20 Interface Yes / No If yes, Depth Lighter / Well Casing Diameter 1.5 Material PVC General Condition OK Protector Road Box / Stickup Casing Secure Collar Intact Comments Comments Spec. Spec. Down Toutistics Parameter Development Information Parameter Development Proceed Computing Spec. Spec. Down Toutistics Development Information Spec. Spec. Down Toutistics Note of the Control of the Computing Spec. Spec. Down Toutistics Note of the Control of	Heavie								
Monitoring Well Number W1-MW-195R Sample Number(s) 1117657 Initial Field Data and Measurements Depth of Well 12.10 Reference Used ToR Depth to Water 9.90 PID/FID Reading 0.0 Height of Column 2.20 Interface Yes/No If yes, Depth Lighter/ Well Casing Diameter 1.5 Material PVC General Condition OK Protector Road Box / Stickup Casing Secure Ground to Reference Comments Development Information Parameter Depth to Reference Completes Spec. Spec.	Heavie								
Depth of Well 12.10 Reference Used ToR Depth to Water 9.90 PID/FID Reading 0.0 Height of Column 2.20 Interface Yes / No If yes, Depth Lighter / Well Casing Diameter 1.5" Material PVE General Condition OK Protector Road Box / Stickup Ground to Reference Collar Intact Comments Cover Locked Other (describe) Parameter Darkton Dura Bare Com Liter Spec.									
Depth of Well 12.10 Reference Used ToR Depth to Water 9.90 PID/FID Reading 0.0 Height of Column 2.20 Interface Yes/No If yes, Depth Lighter/ Well Casing Diameter 1.5 Material PVC General Condition OK Protector Road Box / Stickup Ground to Reference Comments Cover Locked Other (describe) Parameter Depth to Water 9.90 Parameter Depth to Waterial PVC Reference Used ToR PiD/FID Reading 0.0 Material PVC General Condition OK Casing Secure Collar Intact Cover Locked Other (describe)									
Depth to Water 9.90 PID/FID Reading 0.0 Height of Column 2.20 Interface Yes / No If yes, Depth Lighter / Well Casing Diameter 1.5" Material PVL General Condition OK Protector Road Box / Stickup Casing Secure Collar Intact Comments Cover Locked Other (describe) Parameter Depth to Pure Para Con Liter Spec.									
Height of Column 2.20 Interface Yes / No If yes, Depth Lighter / Well Casing Diameter 1.5" Material PVC General Condition OK Protector Road Box / Stickup Casing Secure Collar Intact Comments Cover Locked Other (describe) Parameter Depth to Duran Para Com Liters Spec.									
Well Casing Diameter 1.5 Material PVC General Condition OK Protector Road Box / Stickup Ground to Reference Collar Intact Comments Cover Locked Other (describe) Parameter Para									
Casing Secure Collar Intact Comments Cover Locked Other (describe) Parameter Paramet	Bad								
Casing Secure Collar Intact Comments Cover Locked Other (describe) Parameter Paramet									
Comments Cover Locked Other (describe) evelopment Information Parameter Pa									
evelopment Information Parameter Pa									
evelopment Information Parameter Pa									
Parameter Doubleto Doubleto Doubleto Com Literal Spec.									
Parameter Depth to Pump Purge Rate Cum, Liters Spec.									
Time Water Setting (mL/min) Purged (L) remp (C) Cond. (uS/cm) Pri (SU) ORP (En) (mg/L) (NTU)	nment								
1330 9.90 300 100 0 - Sta	irt.								
1340 1 11.00 1934 6.79 -68.9 0.65 5.16	/								
1350 1 2 10.85 1894 6.75 -73.0 0.59 3.84	8								
1400 1 1 3 10.89 1888 6.74 -76.3 0.54 3.61	-1-1-								
410 4.90 300 100 4 10.87 1891 6.75 -74.7 0.58 3.49 Sa									
Co.									
Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other									
ample Field Treatment If any ambiguity could exist, be sure to indicate the field treatment applied to each sam aliquot with the appropriate suffix in the sample ID on both the sample bottle label and									
the Chain of Custody!									
ield Decontamination? Yes No If Yes, with what? Vaste Container ID 707 307									
10,700									
dditional Comments									
Id Personnel C. Scott Brown Luke Chmielecki Signature									



LEA Comm.	No. 8	8UT907	.001							P	age	16 of 10
Project		JTC P&	W Willow	pond Quar	terly GW	Mon.						3/11/09
Location				d, East Har						S	ampl	le Time 15 :2
Client	P	ratt & V	Vhitney D	ivision - JT	ot							
Monitoring	Well Nur	mber U	JT-MW	1-59	Samp	le Numb	er(s) 1117	7654		1176	54	uf
Initial Field			rements	Reference	Used	Tal	C					
Depth of We Depth to Wa	ter	11,45		PID/FID F	Reading	-0	_					
Height of Co Well Casing	lumn	11	. #	Interface	_	Yes /N	d If ye	s, Depth	_		Ligh	hter / Heavier
Well Casing Protector	Diameter Road	Box St	ickup	Materia	11	PVC	-	General	Condition Secure	_	OK.	Bad
Ground to R	eference			-					Intact	1	//	
Comments								Cover	Locked			
								Other	(describe	2)		
Development		tion										
Parameter	Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbid (NTU	J)	Comment
12:00	11:45	300	100	-	2 12	7/27	1-0	20	204	93		Pumping
14:20	11.71		-	3	12 15	3683	6.57	26.8	2.94	23,		
14:30	11.70			11		3530		19.3	1.76	12.	/	
13:00	11.80			4	12.18	3479		10.6	0.61	7.9		
	11.80			9	12.25	3400	6.55	7.6	0.45	6.8		
15:15	11.80	1/	1/	7.5	12.16	3998	6,55	7.6	6.36	5.7		
	11.89	\forall	V	8	12.17		6.55	7.7	6138	5.2		
Sample.	11.00			0	1211	JIIT	6.0	1.1	0.00	5.0	+	
Sunge												
				(Ne)						-	+	
				1							1	
				-							-	
D 1		1 10	li: D	, i a		100						
Developemen										was made -		
Sample Field	Treatmen	alique		appropri								
Field Deconta Waste Contai			3/No 7307	If Yes, v	with what	? M	leth or	n W	II			
Additional Co	omments											
Field Berer	1 0	Cact D	maxur.		I sale-	Charlet-1-	ale:	.,	CI -			
Field Personne	nesee.	. Scott B ate Emm			Luke	Chmiele	CKI		Sign	ature	non	A



CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST - BUILDING ONE

MARLBOROUGH, MA 01752

ACCUTEST JOB #:	
ACCUTEST QUOTE #:	,
V C	12000 NC2

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- 1	-	a	0	0		a		·			~	a

TEL: 508-481-6200 • FAX: 508-481-7753

	Laborate	71103			722.00				-			_		-								-1-	- 7	
Service Property Co.	CLIENT INFO	RMATION			FAC	ILITY INFO	ORMA	TION			Contract of the Contract of th		1		AN	ALYT	ICAL	INF	ORM	AT:O	N	-		MATRIX CODES
CITY,	Northwest inville in McKinney	. 0 6 2 ZIP	PROJECT NAME LOCATION PROJECT NO. PROJECT									8082	+ Cu, Ni, Za								DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER			
ACCUTEST				co	LLECTION		×	ES	PR	ESEF	RVATI	ON	M	F	0.00	Qq		- 1						SOLID
SAMPLE #	FIELD ID / Po	OINT OF COLLECTION	ON	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTL	HCI	HNO3	HZSO4 NONE	371	VOC	こし	PCBs	PCPA								LAB USE ONLY
/	111765	5		3-11-09	1005	L.C	GW	2	Х			X	X									1		
	111765	5		1	1005	1	1	4	Ц			X		Х	X									6
/	111765	Suf			1005		П	1	Ц	X		Х				×		_	٧,					
7	111765	16			1230			2	Х			Х	X					_	-			\perp		-
/	111765	6			1230			4	Ц		Ш	X		Х	Х			_				_		
1	111765	buf			1230			1	Ц	Х		X				Х								
/	111765	7			1410			2	Х		Ш	Х	Х							_		Sq.	5	
~	111765	7			1410			4	Ц	1	Ш	Х		X	X			_		_		_		
	111765				1410			1	Ш	Х	Ш	χ				×								
	111760	61-	Town .	V	1005	*	4	2	X	1	Ш	X	χ				-					_		
/	11176	61		3-11-09	1005	LC	GW	4				¥		X	X				-					
D	ATA TURNAROUN	ID INFORMATION			DATA DEI	IVERABL	E INF	ORM	ATIO	N						E.		СОМ	MEN	rs/R	EMA	RKS		
☐ 7 DAYS ☐ 48 HOUR ☐ OTHER _ 14 DAY TURNA	RUSH EMERGENCY ROUND HARDCOPY PREVIOUSLY APPR	THE SAME AND ADDRESS OF THE PARTY OF THE PAR	SH IS FAX	DISK DO STATE	ERCIAL "I DELIVERAL FORMS R (SPECIF	BLE Y)							_				Por							
1.	SAMPLE CUSTODY MUST BE DOCUMENTED BE RELINQUISHED BY SAMPLER: DATE TIME: RECEIVED BY: 1. DATE TIME: RECEIVED BY:					RELI 2.	ME SA NQUISH	ED BY:	6	HAN	GE P	D	ATE TI	ME:	CLUI	2.	CEIVE	D BY:	DELI	VER	Υ	- 1		
3. RELINQUISHED E	BY:	DATE TIME:	3. RECEIVED 5.	BY:		4.							P	RESE	RVE W	HERE	APPLIC	ABLE				I ICE		TEMPERATUREC





CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:	
ACCUTEST QUOTE #:	

	CLIENT INFO	RMATION	A POLICE		FAC	ILITY INFO	ORMA	TION	1000		The latest		in y		ANA	LYTICA	AL INI					MATRIX CODES
ADDRESS CITY, SEND REPORT TO PHONE # _ Q	0 Morthwest ainulle abia McKinne 60-747-6181	Drive OG	2062 ZIP	PROJECT I	8	end Q WEH, 8UT90	CT	1					52.60 B	P.H.	8082	, N1, 20						DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST				CO	LLECTION		×		Name and Address of the Owner, where	No. of Lot	RVATI	-	~	-							1 1	SOLID
SAMPLE #	FIELD ID / P	OINT OF COLLECTI	ON	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	HCI	HNO3	H2SO4	ICE	VOCS	CT ETPH	PCBs	PC2A						LAB USE ONLY
1	111766	oluf		3-11-09	1005	LC	GW	1		X		X				Х						
/	111760			3-11-09	1200	LC	6W	1	X	-		ķ	X	-			-	15	+			4
												Н										
li e																				-		
			-11						+	+	\vdash	Н			-	-	+		+		\vdash	
		- F1											36						1			
									H	+	1	H					+		+	-		
11	3. 1									+	T						T	\Box	1			
	DATA TURNAROUN	D INFORMATION	distribution of	Religion	DATA DEI	IVERABL	E INF	ORMA	TION								COM	MENT	S/RE	MARK	S	
7 DAYS 48 HOUF OTHER	R EMERGENCY	. EMERGENCY OR RU	Acres 1		ERCIAL "I ELIVERA FORMS	BLE							ا ا ا	se ovið	CT	RCP CTR	and CP F	ytice	4) li	st		
		SAMPLE CUSTODY		- 0	D BELOW				S CI	IAN	GE PC	-	_		LUD		_		/ERY			
RELINQUISHED	NEW YORK ON THE PARTY OF THE PA	3-11-09	1. P	BY:		RELI	NQUISH	ED BY:				DA	TE TI	dE:		RECEI	VED BY:					
RELINQUISHED		DATE TIME:	RECEIVED	BY:			NQUISH		Ş.,	-7,	, ,	DA	TE TI	WE:		-	VED BY:					
RELINQUISHED	BY:	DATE TIME:	RECEIVED	BY:		SEAL					1100		Pf	RESER	VE WH	ERE APPI	LICABL	E		ON ICI	E	TEMPERATURE



CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

- 8			
-1	ACCUTEST	QUOTE	ļ

ACCUTEST JOB #:

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KR7/2000-1157

	OLIEVE WES	DIMETION			1	1 177/ 1117			_							A110	104:				_ 7	HALLEDIN COREC
	CLIENT INFO	HMATION				LITY INF			1 24			c E		-	AN	ALYT	ICAL	INFOR	MAT.C	N		MATRIX CODES
ADDRESS CITY,	hobia	Dr STATE Me Kinney	ī	PROJECT N	3 (4+	0 61 Cast 180	Mar	do	0	ino	}			ACREST Candiza	TPH '							DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER
PHONE #		47-6181	F	FAX #								_		Q.	W	20						LIQUID SOL - OTHER
ACCUTECT	The same of the sa	100		co	LLECTION		×	ES	PRE	SER	VATI	ON	Ø	13	L	00						SOLID
SAMPLE #	FIELD ID / P	OINT OF COLLECTI	ON	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	E HC	HNO3	H2SO4	TOF	\rightarrow	Metals	5	ă						LAB USE ONLY
1	11176	50	6	Jula	10:55	AF	GW	6	2		4		X		X	X						
1.	11176=		1	1-1	10:55	1	1	1		1		1		χ								
1	11176				13:35			1.	2		4	6	V		X	Х						
/		53 UF		50	13:35			1		1		1		V		Marri						
1	11176				15:20		V	6	2	11	24	1	~	_	V	Х						
1.		54 UF			15:20	A)V	GW	1	-spifs	1		1	^	X								
	11116.	ZI OT			10 00	NE	6 W	<u> </u>	\vdash	3	\top	1					\top	1				
Minage 4	- 189-1-1	in an					\vdash		\forall	\Box	\top						+	\top				
									\vdash	\top	\vdash						1	To the same of	-	\neg		
									\vdash	T		†						+				A Salitan
						je je			T		\top											1
	DATA TURNAROUN	ID INFORMATION			DATA DEL	IVERABL	E INF	ORM	ATION	1							C	OMME	NTS/F	EMAR	KS	
14 DAYS 7 DAYS 48 HOUF OTHER	STANDARD RUSH REMERGENCY	APPROVED BY:	=	DISK D	ARD ERCIAL "E ELIVERAI FORMS	3" BLE							-			c de	0	TR		Repo		+ 1
RELINQUISHED	The state of the s	SAMPLE CUSTODY	MUST BE DO		ED BELOW		ME SA		ALT ALL S	ANC	SE PO		SIO		CLUE	1	COUR		LIVEF	Y		
1. Notif	Marin A	3/11/09 15:40	1. 811	Charl.		2.										2.						
RELINQUISHED 3.	BY:	DATE TIME:	RECEIVED BY:	and the same of th		4.	NQUISH	ED BY:				D	ATE TI	ME:		4.	CEIVED	BY:				
RELINQUISHED 5.	BY:	DATE TIME:	RECEIVED BY:		A.	SEA							P	RESER	RVE W	HERE A	PPLICA	BLE		ON		remperature C



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

				Page _	of
		on.		Date	6/4/09
	T				
	1.			<i>.</i> n	
Departed from Site _	160	Vehicle			11-1-1
7				Return /	4546
-					
Concrete Coring		Last Sample	Number Used		
Construction		Last Location	on ID Used		8
Waste Management		Current Loc	ation (if not comple	ete) ON 5	ite s
7		Sampling fo	r v	DCS TAPH	Metals, F
Inspection		Laboratories	used	ALL	Utc St
Site Walk Over		Paperwork &	& Equipment left at	/in OCC	1ce
Surveying		Site Contact			
Other (Describe)		Contractors	on Site	15	A
1				- 00	
Weather		Time and pl	ace to meet contrac	ctors	
Missing Equipment					
	no	Deciduals Disposit	ion		
fairing &	1			Contain	ar ID
		1 200000	pprox. Amount	Contain	CI ID
			3	- 111	0
			+1.3L	714	30
				(52)	
		Other			
Weather Conditions					
Temperature 970	1)	Precipitation -		Wind -	
Comments					
C Designation of the Control of the					10
-					
	Equ	ipment Used			
LEA Number		ipment Used		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	LEA Number
LEA Number		Item	ı		
		Item Generator 3500 War			LEA Number 153 022
LEA Number 090 086		Item Generator 3500 War Meter, Conductivity			153
LEA Number		Item Generator 3500 War		ent	153 022
LEA Number 090 086 024	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos		ent	153 022 021
LEA Number 090 086 024 060	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos	l Tools & Equipme		153 022 021 152
LEA Number 090 086 024 060 007	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible	l Tools & Equipme		153 022 021 152 073 040 201
LEA Number 090 086 024 060 007	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera	l Tools & Equipme		153 022 021 152 073 040 201 038
LEA Number 090 086 024 060 007	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter	l Tools & Equipme		153 022 021 152 073 040 201 038 023
LEA Number 090 086 024 060 007	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter VOC Analyzer, Pho	I Tools & Equipment of Equipmen		153 022 021 152 073 040 201 038 023 012
LEA Number 090 086 024 060 007	1 3 3 4	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter VOC Analyzer, Pho Water Level Indicate	I Tools & Equipme nec. Master or Isco tovac 2020 (PID)		153 022 021 152 073 040 201 038 023 012
LEA Number 090 086 024 060 007	Qty	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter VOC Analyzer, Pho	I Tools & Equipme nec. Master or Isco tovac 2020 (PID)		153 022 021 152 073 040 201 038 023 012
LEA Number 090 086 024 060 007	1 3 3 4	Item Generator 3500 Wai Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter VOC Analyzer, Pho Water Level Indicate	I Tools & Equipme nec. Master or Isco tovac 2020 (PID)		153 022 021 152 073 040 201 038 023 012
LEA Number 090 086 024 060 007 008 025	Qty 1 3 3 4 3	Item Generator 3500 Wa Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter VOC Analyzer, Pho Water Level Indicate Water Quality Meter	I Tools & Equipme nec. Master or Isco tovae 2020 (PID) or r w/Flow Cell	Rental)	153 022 021 152 073 040 201 038 023 012
LEA Number 090 086 024 060 007 008 025	1 3 3 4	Item Generator 3500 Wa Meter, Conductivity Meter, pH/Temp Miscellaneous Smal Pump, Grundfos Pump, Peristaltic (sp Pump, Submersible Pump, Watera Turbidimeter VOC Analyzer, Pho Water Level Indicate Water Quality Meter	I Tools & Equipme nec. Master or Isco tovac 2020 (PID)	Rental)	153 022 021 152 073 040 201 038 023 012
	tford, East Hartford, C y Division - JTot Departed from Site Geoprobe Work Concrete Coring Construction Waste Management Inspection Site Walk Over Surveying Other (Describe) Weather Missing Equipment Other (Describe) Faulty Weather Approximately Portions Temperature	tford, East Hartford, CT y Division - JTot Departed from Site (6 C) Geoprobe Work Concrete Coring Construction Waste Management Inspection Site Walk Over Surveying Other (Describe) Weather Missing Equipment Other (Describe) Faulty Appropri	y Division - JTot Departed from Site Geoprobe Work Concrete Coring Construction Waste Management Current Loc Sampling fo Laboratories Site Walk Over Surveying Other (Describe) Weather Missing Equipment Other (Describe) Residuals Disposit Item A Soil/Solid Groundwater Decon Fluid PPE Other Weather Conditions Temperature Precipitation Vehicle Odomete Current Proj Last Sample Last Locatio Current Loc Sampling fo Laboratories Sampling fo Laboratories Current Proj Residuals Disposit Item A Soil/Solid Groundwater Decon Fluid PPE Other	tford, East Hartford, CT y Division - JTot Departed from Site	tford, East Hartford, CT y Division - JTot Departed from Site



LEA Comm. Project Location	L		W Willow	pond Quar d, East Har						Dat	e 5 of 12 te 6/4/09 tole Time 16:3
Client				ivision - JT						Sam	ole Time 20.
Monitoring						le Numb	er(s) 1123	3429		11734	79°F
Depth of We Depth to Wat Height of Co. Well Casing Protector Ground to R Comments	ll ter 8 lumn Diameter	N/A N/A	4	Reference PID/FID I Interface Materia			o If ye	General Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	ehter / Heavier Bad
Development		tion									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0925	NIA	350	100	Ç		_	-		_		Intial
0930					13.78	590	6.01	2584 279.4	4.84		
0950					14.16	582		791.8		4.8	
1000		-			14.91	578	4.64	3/7.8	4.37	3.1	
1010		\neg			14.31	577		350.1	4,09	2,3	
1025					14.75	577		355,1		1.8	
1030				+	14.28	578		357.4		2.1	1
1035	1	4	4	7	14.71	577	4.55	355.6	4,07	1.9	Sangle
					_/						
				B	7						
				×	/			_	\		

	X										
				· · ·							\
Developemen						•					
Sample Field	Treatmen	alique		approprie							A STATE OF THE PARTY OF THE PAR
Field Deconta Waste Contain		? Ye	s/100 4130		with what	?					
Additional Co	omments	to	re fo to Hor	diam	iki.	+ 2	ell	enabl	ins to	a Hair	depth
ield Personne		ate Emm	ons			ia Kim			Sign		11/1
				00000			******		/	1//)	70



FIELD SAMPLING RECORD

Initial Field Da Depth of Well Depth to Water Height of Colu Well Casing D Protector Ground to Ref Comments Development I Parameter Time	Depth to Pump Water Setting	rements	Reference PID/FID I Interface	Used Reading	NM Yes/N	€ C	s, Depth General Casing		Lię	ghter / Heavie
Depth of Well Depth to Water Height of Colu Well Casing D Protector Ground to Rei Comments Development I Parameter Time	Fr 3.20 amn 3.24 Diameter 1.5 Road Box/St ference NA	ickup	PID/FID I Interface	Reading	NM Yes/N	o If ye	General Casing	Conditio		
Parameter I	Depth to Pump Water Setting						Cover	Intact Locked (describe	7	
Time	Water Setting									
	20	(mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
		250	0	-	- 21	TIC .			->	PURGIN
		PPED		e F	Low	WAS J	00 fl	14 lt		PURGIN
1020	4.85 1	130	6.2	-	656		-174.2	273	25,2	PURGING
	5.00	180	7.4	17.26	665	6.67	-173,9	3.25	2013	
10:45		1300	8,6	17.37	664	6.65	-173.3	3,42	17. 2	
10:55		120	9.8				-174,9		16.4	
11:05		120	11.0	19.14			-1789		13.5	
11:15			12.2		663	6.61	- 174.0	2.99		
11:25		+	134	19, 21	-115	6.05	- 178,9	2.21	12.8	
11:35	-++-		15.2	20.38	665	0.67	-1703	DUK	12,9	
11:50	1			2075						
11:55				20,86						
12:00	1 1	4		20166			-176.5			SAMPL
			-	,						
						7	00			
							4			
Developement	Method Perista	altic Punk	/ Bailer /	Inertial P	ump / Ot	her				
	reatment If any alique	ambiguit	ty could exi	ist, be sur	e to indi	cate the f				
Field Decontain Waste Containe		es (No) 4130	If Yes, v	with what	?					
was t	rpm setting	-	ece on usable	. Atle	mpted to exc	(on	From a	n 60 b/c	orpm he	but drope was tak
Field Personnel	Nate Emm Rich D'An	3.75-27-		Sophi	ia Kim			Sign	ature OL	Her
lmay oil	ILTER	US	eD					0	7	7.



Project U7 Location P8	BUT907.001 TC P&W Willow W East Hartfow att & Whitney I	d, East Hart	ford, CT	Mon.				Dat	e + of 12 e <u>C 14 109</u> ole Time 12:30
Monitoring Well Num	ber WT-1	1W-46	Sampl	e Numbe	er(s) 1123	430		1173	4300F
Depth to Water Height of Column Well Casing Diameter	77	Reference PID/FID F Interface Materia	Used Reading N/A	V/Yes/No	A If ye	General Casing Collar Cover	Condition Secure	on OK	ghter / Heavier Bad
Development Informat	ion								
Parameter Depth to Water	Pump Purge Rai Setting (mL/min	e Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1120 N/A 1125 1135 1145 1145 115 1270 1275 1730	350 100	Ç Z	15.83 15.86 15.85 15.85 15.85	181 182 181 182	3.74 3.96 3.97 3.96 3.96 3.96 3.97	414.6 439.6 166.5	3.67 3.18 3.02 3.05 3.05 3.05 3.05 3.05 3.05	30.9 5.8 5.1 4.3 3.7 2.9 2.1 1.8 2.7	Sample
Developement Method Sample Field Treatment	t If any ambigu aliquot with t	ity could ex he approprie	ist, be sur	e to indi	cate the f				
Field Decontamination? Waste Container ID	the Chain of (Yes No 414130		with what	?					
Additional Comments	Ove t-	Well	l cas	ing	digh	etel	no p	Repto.	-utys to lon
	te Emmons		Soph	ia Kim	Al-		Sign	ature	DA



EA Comm. I roject ocation lient	Į P	&W Eas	W Willow st Hartford	pond Quar i, East Hart vision - JT	ford, CT	Mon.				Dat	e 8 of 1 te 6/4/0 ple Time/2
Monitoring						e Numbe	er(s) 1123	426	11	123420	e uf
nitial Field I Depth of Wel Depth to Wat Height of Col Well Casing I Protector Ground to Re Comments	l er lumn Diameter	8.44 Box/St	b"	Reference PID/FID F Interface Materia	Reading			General Casing Collar Cover	Conditions Secure Intact Locked (describe	on Ok	ghter / Heavi
evelopment		tion									
Parameter	Depth to Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:50	8,44	300	150								Pumpins
12:10	/	1	150	3.00	13.16	919	5.37	-64.0	0,51	5,44	1 -
12:20			150	4.50	13.00	911	5,28	-620	0.45	2.43	
12:30			150	5,00	13.08	906	5.07	-50.5	0.41	2.17	
12:40			150	6.50	13.12	900		-38.7	0.41	1.90	
12:55			150		13.18	898		-39.4	0.41	1.76	
12:50	1	V	150	8.00	13.17	899	5.00	-39.3	0.40	1.55	
Sample					To the second						
									_		
		6.	Li D	V D . 11 (1		100					
evelopement ample Field	Treatmen	alique the C	ambiguit ot with the hain of Ci	y could exi e appropria ustody!	st, be sur	e to indic in the sar	cate the f				
ield Deconta /aste Contair Iditional Co	ner ID	71	t130 ble to	2	with what	-	wate	r level	die	to well	diameter
eld Personnel	100000	ate Emm			Sophi	a Kim			Sign	ature	anost)



EA Comm.		8UT907									9 of 1
roject				pond Quar						Dat	e 614 109
ocation				l, East Har						Samp	ole Time 14:3
ient				vision - JT	ot						
Monitoring	Well Nu	mber _	WFMU	1.49	Samp	le Numbe	er(s) 1123	3431		11734	317
nitial Field I	Data and	Measu	rements				,				
Depth of Wel Depth to Wat Height of Col	1	7.5		Reference		TOR	, ,				
Depth to Wat	er	1.4		PID/FID F Interface	Reading	N	1			112747	62 W 715250 W
leight of Col	umn_5	. / '					o If ye	s, Depth		Lig	ghter / Heavier
Well Casing I	Diameter	07'	/	Materia	1	VC		General	Conditio	on OK	Bad
Protector	Road	Box / St	ickup)	,			Casing	g Secure	V	
Ground to Re	eference		(A)					Collar	Intact	X	
Comments								Cover	Locked	2	
								Other	(describe	()	
evelopment	Informa	tion									
Parameter		Pump	Durge Date	Cum. Liters	TODAY TO THE STATE OF THE STATE	Spec.			DO.	Turbidity	
	Water	Setting	(mL/min)	Purged (L)	Temp (C)	Cond.	pH (SU)	ORP (Eh)	(mg/L)	(NTU)	Comment
Time	11	3/7		100		(uS/cm)					- 7/
1315	7.4	350	100	_0	0	ファ	1140	7200	2.94	15,4	Inhal
1320	2.0				19,77	375	4190	21171	4:93	370	
1330 1340	ZC			4	20,27	264	51/4	Z47.8	1110	378	
1350	2.8			1871	16.41	322	4.38	7601	1138	15.7	
1400	70				16.42	328	4.98	7/75	151	10.4	
1410	2.8					379	5.17	757.5 750:6	637	4.8	
1470	2.9	-		1		330	510	741	0.77	3.4	
1425	2.8	1			16.61	331	5.15	7917	0.74	3.1	
1430	2.4			1	16.67	330	5,14	796.7 247.8 244.1	0.30	4.2	
1435	7.4	-	4	8	16.59	329	5.14	7441	0.31	4.Z 3.8	Sample
					(A)						
		1		/							
_											
	\					-			11:A		
	rease san			\							
Developemen	Carrier Street, Carrier	1		Bailer /							
ample Field	Treatme	aliqu		approprie						lied to eac bottle lab	
ield Deconta	mination		es (No)		with what	?			1222-1-1		
Vaste Contain		The second secon	130								
dditional Co	mments			4							
3	14' 7	6	and								. ~
eld Personne		late Emn	nons		Soph	ia Kim	19.00.000		Sign	ature /	
	-	ich D'A	The second secon)	-				//	1/2/	1/1
			11-11-11-11-11-11-11-11-11-11-11-11-11-		14.14.7.77.79		AND A STATE OF THE		//	//	M



LEA Comm. I		8UT907		10	1 011						10 of 12
Project				pond Quar	-					Dat	e 6/4/09
Location				i, East Har						Samp	ole Time 14:45
Client	F	ratt & W	hitney D	ivision - JT	ot						
Monitoring	Well Nu	mber <u>/</u>	VT-M	W-57	Samp	le Numbe	er(s) 1123	1433	1	12343	33 uf
Initial Field I				D - C	Tid	+ 20 6	_				
Depth of Wel		18,10		Reference		106	_				
Depth to Wat	er	7,00		PID/FID F							
Height of Col	umm	7 0		Interface		Yes / No	o If ye	s, Depth	-	Lış	ghter / Heavier
Well Casing l	Diameter	1,	5 u	Materia	1 P)	16		General	Condition	on OK	Bad
Protector	Road	Box / St	ickup					Casing	Secure	~	
Ground to Re			JM						Intact	1	
Comments									Locked	5	
Comments									(describe	()	
								Other	(46561100	-)	
Development		ation									4
Parameter	Depth to	Pump	Purge Rate	Cum. Liters	2 320	Spec.			DO	Turbidity	
Time	Water	Setting	(mL/min)		Temp (C)	Cond. (uS/cm)	pH (SU)	ORP (Eh)	(mg/L)	(NTU)	Comment
1255	11:00	300	150	6	1						PURGIN
13:15	11,40	1	120	3	16,92	2906	5.95	-17,1	178	54.6	RU
13:25			1	4.2	16.91	2810	E ldo	-11.3	2.51	36,1	
13:35	,			4.2	11,91	7727	5,39	-6.2	2,97	29,8	
13:45				6.6	16.01	21.22	5,210	0,7		21.7	
13:55						2629			2 02	10 C/C	209.04
14:05				9.0		2547		4.7	4.15	6.22	1.0
14:15				10,2		2531	11 00	717		3.07	
14:20				10.8	17.32	2429	481	会 フ で		2,96	
14:25				11.4		2490			4.35	3,07	
14:30				12.0	1221	2444	4.56	13.9	450	2,61	
14:35				12.6	17 3/	2478	4.47	17.6	467	2,32	
14:40				13 7	17.34	2462	4.35	19.6	4.66	2.16	
14145	V	A-	V					19.4		2,30	SAMPLE
1-1725				1510	TTIO	- · · · ·	1.70		1.12	2130	311.40
							TSK	2			
			5								
Developemen	t Method	Perista	iltic Pump	/ Bailer /	Inertial P	ump / Ot	ner				
Sample Field	Treatmen	nt If any	ambiguit	v could exi	st, be sur	e to indi	cate the f	ield treat	ment app	olied to eac	ch sample
				approprie							
			hain of Ci		55				•		
Field Deconta	mination		s/No		with what	9					
Waste Contain	ner ID	211	1120								
Additional Co	mmonto		00		, ->	21114 01	20	11	Besin	4 1	ANCINES
wA-	ce le	wir.	+ SAL	WATER	rgin	3	20	VI	acro.	()	,
ield Personnel	N	ate Emm	ions		Soph	ia Kim			Sign	ature_	
	500	ich D'An							60	Po 2000	1/



EA Comm.	No. 8	8UT907	7.001							Page	e // of 1
roject	U	JTC P&	W Willow	pond Quar	terly GW	Mon.					te 6/4/0
ocation				i, East Har						Samp	ole Time 15
lient	P	ratt & V	Vhitney D	ivision - JT	ot						
Monitoring	Well Nur	mber D	UT-MU	v-58	Samp	le Numbe	er(s) 1123	428		12342	8 UF
nitial Field I Depth of We		Measur 7.75		Reference	Usad	7	00				
Depth to Wa		11.15		PID/FID F			of C				
leight of Co		Ce. 600		Interface	ceauing	Yes /(No) If ve	s, Depth		Li	ghter / Heavi
Well Casing		1	12"	Materia	i d	PUC.	<i></i>		Conditio		
Protector		Box St		Materia	1	PUC	-		Secure	on Ok	Bad
Ground to R			ronap					0.7	Intact	V	
Comments									Locked	L	
	S								(describe	(e)	
evelopment	Informo	tion									
Parameter				losso en senso en		Spec.			receipte.	-2007 (700200)	
Time	Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)		pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
13:35	11.15	300	150		-						Pumping
	10.95	-1-	156		15.27		5.50	11.4	0.87	160	
13:55	11		150		16.38		5.03		0.98	139	
14:05	11.15	-	(50		15.79			92.9	0.65	107	
14:15	11.15	-	150		15.93			114.1	0.59	72.1	
14:25	11.15		130		15,00		4.69		0.52	44.4	
14-35	1(.15	_	100		16.17			51.2	0.42	33.1	
14:45	11:15	-	160		16.22	1252	4,97	48.6	0.48	0-	
14:55	11.15	+	150	13.5		1252	4.98	39.4	0.50	13,7	
15:05	11.15	1	150	14.25		1252			0.49		77-1-11
15:16	11.15	-V	150	15.00		1253		38.6	0.48		
15-20	11.15		150	16.50	16.15	1252	4.98	39.1	0.49		
Sample -	11.10		156	16.50	16.13	1252	7,78	24.1	0.18	7/0/	
singe											
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mple Field	Treatmen	alique	ot with the	appropria							
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eld Deconta			s No	II Yes, v	vith what						
aste Contai	SECOND NEWSFILM	1	4130								
lditional Co	omments										
ld Personne		ate Emm			Sophi	a Kim			Sign	ature	muss



FIELD SAMPLING RECORD MONITORING WELL INVENTORY

Job No.	88UT907.00	1		V					Page 12 of 17
Project	UTC P&W V	Villowpo	nd Quarte	erly GW	Mon.				Page 12 of 17 Date 6 / 4/69
Location	P&W East Ha	artford,	East Harti	ford, CT					
Client	Pratt & White	ney Divi	sion - JTo	ot					
Sample ID	Location ID	Time	Predicte	ed Depth	Actua	Depth	DID/EID	Reference	Community
Sample ID	Location ID	Time	of Well	to Water	of Well	to Water	PID/FID	Elevation	Comments
2232532	WT-MW-43	8:40				1.54			
2232533	WT-MW-42	10:25				3,25 4.80 4.35			
2232534	WT-mw-41	10:30				4.80			
2232535	wi-mw-44					4.35			13" Cap
2232536	Staff G					3.78			
2232537	WT-MW- 50		-	2.10-		2.01			
2232538	WT-MW-195R	(ein)				10.00			1/2" Cap
2232539	wT-mw-40					12.24		4	
2232540	WT-MW-45					8.44			
2232541	WT-MW-47					8.44		-	
2232542	WT-MW-48				7.50	4,26			
2232543	WT-MW-46				17.70	5.70			
2232544	WT-MW-49				7.5	4.26 5.70 2.4			
2232545	WT-MW-57				18.10	11.0			
2232546	WT-MW-58				12.75	11.15			
2232547	M1-MM-28			111-1-	11115	11.13		-	-
2232548								Q _E	
2232340			_			-		760	
								· ·	
				* =					
Field Personnel	Nate Emmons			Sophia	Kim			Signature	i Guidan N



CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

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۱	ω	"	EDI	JOB	₩.

ACCUTEST QUOTE #:

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1 1682 3009-453

Setuple Silving	CLIENT INFORMATION			FACI	ILITY INFO	ORMA'	TION	MIS		H. C.				ANAL	YTICA	L IN	FORM	MATIC	NC		MATRIX CODES
Plainvi	Normwest Dr Normwest Dr No STATE IN McKranes 860 410 30	Λ	PROJECT LOCATION PROJECT	88L	л9b	rd						83600	ETPH	25 S.O.B.2	ROLD B. Metals Cu.		<i>j</i> *				DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST			CC	LLECTION		RIX	LES	Management of the last	-	VATIO	_	Š	1	A	7 3						SOLID
SAMPLE #	FIELD ID / POINT OF C	DLLECTION	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	NaOH	HNO3	NONE	3-	9	Ü	4	T						LAB USE ONLY
-	1123432		6/4/09	12:00	SIL	GW	2	×			Х	X									
7 -	1123432		1		SK	1	4			X	X		X	X							
_	1123432UF				SL		1		X		X					(M)					
-	1123432			1	SK		1		X		X)	(M	1			. 7		
	1123 433			14:45	35		2	X			X	X									
-	1123433			1	-5K		4		-	X	X		X	<							
1	11234334			1	SE		1		X		Х)							
_	1123446	30		01:00	-	l	2	X			X	X									
-	1173479	()	395	1035	10		7	Χ			λ	X									
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,	.1173479vF	1 .41.			1		1		X		X	1	1	1	(
D	DATA TURNAROUND INFORM	ATION	402	DATA DEL	IVERABL	E INF	ORMA	TION			1			Talent .		CO	MMEN	NTS/F	REMA	RKS	
OTHER	R EMERGENCY AROUND HARDCOPY, EMERGENCE PREVIOUSLY APPROVED	CY OR RUSH IS FAX	DISK I	ERCIAL "E DELIVERAL FORMS R (SPECIF)	BLE Y)					_		R	CP	R	epo	4				ride vide	lists for
RELINQUISHED		USTODY MUST BE		ED BELOW		ME SA		S CH	ANG	E POS		SION,	ALTERNATION OF	LUDIN	G COL	27007 A 1171	POLICE STREET	LIVEF	łΥ		
1. RELINGUISHED	Cal410-	1 1600 1. 13	- //.	4	2.	NQUISH			N.			E TIME			2. RECEIV		V.		_		Ť.
RELINQUISHED	BY: DATE TIME:		BY:		SEAL		**		_			PRE	SERV	E WHE	RE APPL	ICABL	E		Of	N ICE	/EMPERATURE



CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST • BUILDING ONE

ACCUTEST JOB #:	

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	Laboratories			MARLBOR 08-481-620					53				1	CCUT					20	L)	57	
	CLIENT INFORMATION		FAC	ILITY INFO	ORMA	TION		E VIVI	NISE.	T			AN	ALYT								MATRIX CODES
ADDRESS CITY, SEND REPORT T	Northwest Dr VILLE CT 06062 STATE ZIP OF MCKINNEY OF 960 410 3000	PROJECT N East	Ha SUT 9	1+End	1 W.	llow T	Bro	EN	N 1/1 0	***	8240B	ETP14	5 8082	CRD & MERLYS CUNIZED					şe.			DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST		co	LLECTION		XIX	JE S	-	THE RESERVE	VATIO	N	200	H	77	18	57	4060	SOLID					
SAMPLE #	FIELD ID / POINT OF COLLECTION	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	HCH NaOH	HNO3	H2SO4	TCo	70	Q	d.	16.10	40							LAB USE ONLY
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.est	1178480	07/10	1	1	1	4			Χ	χ	1	X	X									
2	1173430	*				1		X		χ				X								
i en	1173431		1435			7	X	ľ		X	X										-	
-	1173481		1			4		П	У	X		X	X									
Same.	1173/131/4					1		X	7	V				V							T	
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-	1123421		12.50	1		4	×	1	1		\neg	X	X		4	3					\top	
	11712 3290 Court		1			1	\sqcap	V	*	Ž		^	^	X							\top	
	1773456		1520		1	1	X			X	X											
- 1	11/23/4 60	6/4/69	1 A C		SIN	14			X	X	.i.	X	χ							1		
	DATA TURNAROUND INFORMATION	DATA DELIVERABLE INFORMATION									COMMENTS/REMARKS											
14 DAYS	S STANDARD APPROVED BY:	STAND	DARD									b -		de	25	gare :	01	173				1 1

7 DAYS RUSH 48 HOUR EMERGENCY OTHER 14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED	COMMERCIAL "B" DISK DELIVERABLE STATE FORMS OTHER (SPECIFY)	- FOR VOCS, PEB., and provide CT RCP Report
SAMPLE CUSTODY MUST BE	DOCUMENTED BELOW EACH TIME SAMPLES O	CHANGE POSSESION, INCLUDING COURIER DELIVERY

	SAMPLE CUSTO	DY MUST BE DOCUMENTED BELOW	EACH TIME SAMPLES CHANGE	POSSESION, INCLU	UDING COURIER DELI	VERY	
RELINQUISHED BY SAMPLER:	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:		
1. Gold All	colling to	1001. B.n/ My	2.		2.		
RELINQUISHED BY	DATE TIME:	RECEIVED BY:	RELINQUISHED BY:	DATE TIME:	RECEIVED BY:		
3.		3.	4.		4.		
RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	SEAL #	PRESERVE	WHERE APPLICABLE	ON ICE	EMPERATURE
5.		5.	- 11				C

5.



CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

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CCUT	FST	.IOR	4.
	5-01	000	W .

ACCUTEST QUOTE #:

KB2/2009 -453

	CLIENT INFORMAT	TION			FAC	ILITY INF	ORMA	TION	193						ANA	LYTIC	CAL IN	FORM	AT:ON			MATRIX CODES
ADDRESS CITY, PODI SEND REPORT TO PHONE #	Verthwest Dr IL CT STATI IN MCKINNEY 0: 860 410 3	ZIP	PAN FAST HANDON (AILLIAN BROWN ALLIAN PORS PROJECT NAME LOCATION PROJECT NO. FAX # COLLECTION × 80 PRESERVATION							-	S 82608	ETPH	S 8082	US,CY, NI, ZN						DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER		
ACCUTEST				co	LLECTION	_	MATRIX	OF TLES	PRI	SER	VATIO	NC	X	+	0	40	70	1 1				SOLID
SAMPLE #	FIELD ID / POINT	OF COLLECTION	ON .	DATE	TIME	SAMPLED BY:	MA	# OF BOTTLES	HC	NE NE	H2SO NON	3	×	Ü	200	028	7					LAB USE ONLY
-	1123426	ut (PV)		94/09	1520	NE	M	1		X		X				X						
	71721129	ASC -S																				
	1100 9 1 000	4																				49.80
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☐ 48 HOUF ☐ OTHER 14 DAY TURNA	S STANDARD AND AND AND AND AND AND AND AND AND AN	RGENCY OR RUS	_	STAND COMM DISK D STATE OTHER	ERCIAL "I ELIVERA FORMS	BLE											PC		and	pr	v d	L lists für
DEL MICHAEL	The second secon	PLE CUSTODY			D BELOW		ME SA		S CI	IANG	E PC	-			LUDI	-			VERY			
1. ON	10 X - 101	4/69 1/60	1. B	Luni		2.	NGUISH	ED BY:		7		DA	TE TIM	id:		2.	EIVED B	11				
BELINGUISHED	DAT	E TIME:	RECEIVED BY	10000		REL	NQUISH	ED BY:				DA	TE TIN	IE:		REC	EIVED B	Y:				
RELINQUISHED	BY: DAT	E TIME:	RECEIVED BY	1	_	SEAL #					PRESERVE WHERE APPLICABLE ON ICE [EMPE				remperature							
5.			5.												31							С



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

Project	LITC P&W Willow	wpond Quarterly GV	V Mo	un.		Page _	6/5/09	
Location		rd, East Hartford, Ci		711.		Date	615101	
Client			1					
	Pratt & Whitney D		5 :5	A Valent	· CT	C. I	1 6 1	
Arrived at Site	a co Dep	parted from Site	3,3		le 57~ ter (Start)		Lan 1	
		Coongoho Work				Return	RT 6:	
Soil Sampling		Geoprobe Work	. A					
/ Groundwater San	71	Concrete Coring			le Number Used	_Wa	23444	
Surface Water Sa		Construction		Last Locati	ion ID Used			
Vapor/Air Sampl	ing	Waste Management		Current Lo	ocation (if not complete)			
Concrete Samplin	ng			Sampling f	for	See	chain	
Other Sampling		Inspection		Laboratorio	es used	Acc	chain cutest	
Other Sampling		Site Walk Over		Paperwork	& Equipment left at/in	0	Pfice	
		Surveying		Site Contac	ct			
Well Developmen	nt d	Other (Describe)		Contractor	s on Site	1		
on-productive Time						1		
None		Weather		Time and r	place to meet contractors		_	
				i inic and p	hace to meet contractors		1	
Equipment Break		Missing Equipment						
Late		Other (Describe)			2020			
Quality Assurance Che	ecks			Residuals Disposi				
Yes N/A No				Item	Approx. Amount	Contain	ner ID	
Sam	ple labels complete			Soil/Solid				
Sam	ple/cooler seals OK			Groundwater	17gal	7141	130	
Alls	samples obtained			Decon Fluid	0			
Chai	ins of custody			PPE				
All f	orms/logs complete			Other				
		Weather Conditions						
		reality Conditions						
Site	H&S Plan on site	Temperature 73	S	Draginitation	1 14 0 \ Win	A //	4_15	
	H&S Plan on site	Temperature 72	5	Precipitation	light Rain Win	d _/0	1-15	
	H&S Plan on site uments calibrated	Temperature 70)'s	Precipitation	light Rain Win	d _/0	1-15	
Instruction Instru	uments calibrated) 'S'	Precipitation	light fain Win	d _/0	0-15	
Instruction Instruction	uments calibrated)'s	Precipitation	light Rain Win	d _/0	1-15	
Instr	uments calibrated)'s	Precipitation	light Rain Win	d _/0	1-15	
Instruction Instruction	uments calibrated)'5'	Precipitation	light Rain Win	d _/0	1-15	
Thecked By Kilden McKen	uments calibrated			Precipitation	light Kain Win	d _/0	1-15	
Thecked By Robert McKen xpendable Items Used	uments calibrated				light Kain Win	d _/0	LEA Number	
Thecked By Kolon McKen xpendable Items Used	uments calibrated	Comments	Equ	ipment Used		d _/0		
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5	(specify size)	Comments LEA Number	Equ	ipment Used	'att	d _/0	LEA Number 153 022	
instruction in the class of the	(specify size)	LEA Number	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi	'att	2	LEA Number	
Expendable Items Used Oty Item Bailer, Disposable (Drum, Closed Top 5	(specify size)	LEA Number 090 086	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi	'att	2	LEA Number 153 022	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top S Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024	Equ Qty	Item Generator 3500 W Meter, Conductivi Meter, pH/Temp Miscellaneous Sm. Pump, Grundfos	att ty TSF Reviat- all Tools & Equipment	2	LEA Number 153 022 021	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size)	LEA Number 090 086 024 060	Equ Qty	Item Generator 3500 W Meter, Conductivi Meter, pH/Temp Miscellaneous Sm. Pump, Grundfos	'att ty 'T'SI Reviat	2	LEA Number 153 022 021 152	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top S Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007	Equ Qty	Item Generator 3500 W Meter, Conductivi Meter, pH/Temp Miscellaneous Sm. Pump, Grundfos	att ty The Review all Tools & Equipment (spec. Master or Isco)	2	LEA Number 153 022 021 152 073	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera	att ty The Review all Tools & Equipment (spec. Master or Isco)	2	LEA Number 153 022 021 152 073 040	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter	ratt ty all Tools & Equipment (spec. Master or Isco)	2	LEA Number 153 022 021 152 073 040 201	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph	ratt ty all Tools & Equipment (spec. Master or Isco) e	2	LEA Number 153 022 021 152 073 040 201 038 023	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph Water Level Indica	ratt ty TSF Reviatal all Tools & Equipment (spec. Master or Isco) e notovac 2020 (PID)	(NE)	LEA Number 153 022 021 152 073 040 201 038 023 012	
Instruction of the control of the co	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph	ratt ty TSF Reviatal all Tools & Equipment (spec. Master or Isco) e notovac 2020 (PID)	2	LEA Number 153 022 021 152 073 040 201 038 023	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph Water Level Indica	ratt ty TSF Reviatal all Tools & Equipment (spec. Master or Isco) e notovac 2020 (PID)	(NE)	LEA Number 153 022 021 152 073 040 201 038 023 012	
Appendable Items Used Ry Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph Water Level Indica	ratt ty TSF Reviatal all Tools & Equipment (spec. Master or Isco) e notovac 2020 (PID)	(NE)	LEA Number 153 022 021 152 073 040 201 038 023 012	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty	ipment Used Item Generator 3500 W Meter, Conductivi Meter, ph/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph Water Level Indica	ratt ty TSF Reviatal all Tools & Equipment (spec. Master or Isco) e notovac 2020 (PID)	(NE)	LEA Number 153 022 021 152 073 040 201 038 023 012	
xpendable Items Used ty Item Bailer, Disposable (Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 1/2", NOS Tubing, 3/8", NOS	(specify size) 55 Gallon th & Safety Items	LEA Number 090 086 024 060 007 008	Equ Qty 3	ipment Used Item Generator 3500 W Meter, Conductivi Meter, PH/Temp Miscellaneous Sm. Pump, Grundfos Pump, Peristaltic (Pump, Submersibl Pump, Watera Turbidimeter VOC Analyzer, Ph Water Level Indica Water Quality Met	all Tools & Equipment (spec. Master or Isco) e notovac 2020 (PID) ator ter w/Flow Cell	tal)	LEA Number 153 022 021 152 073 040 201 038 023 012	



DAILY FIELD REPORT

Supplemental Sheet

Loureiro Engineeri	ng Associates, Inc.		Supplemental Sheet
Job No. Project Location Client	88UT907.001 UTC P&W Willowpond O P&W East Hartford, East Pratt & Whitney Division	Hartford, CT	Page 2 of 12 Date 6/5/09
Description of Sit	e Activities		
8:00 8:45 2:00 2:45 3:30 3:50	On Site Work Plan, Calibi Started Moving Called Benny Finished Somue Benny Packed I Dump Waste Coff Site	ration, Divide equipment equipment to locate to schedule 3:00 line upl Samples	it ions Pick up
Drum # 7	14130 is about Half full		
Field Personnel	Nate Emmons Rich D'Amico	Sophia Kim	Signature



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

LEA Comm.			-10	-L-CW		Page _	3 of 12 615109
Project Location	UTC P&W P&W East I				vion.	Date	615104
Client	Pratt & Whi		ion - JTo	t			
Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
11234 43	Blank	8:30	BKT			Trip Blank	714130
1123444	Equipment Blank Duplicate	14:30	BKE'	\		Trip Blank Equipment Blank DUP of wi-mw-50	714130
1123439	Onplicate	10:25	CM			DUP of WT-MW-50	714130
			/				
		ļ			/		
Field Personnel	Nate Emmon	S		Sophia	Kim	Signature	
	Rich D'Amic	0				Signature Nathan Enna	ord



DAILY FIELD REPORT CALIBRATION RECORD

Job No. Project Location Client	88UT907.001 UTC P&W Will P&W East Hart Pratt & Whitney	ford, East Hartfo	ord, CT					age 4 of 12 Date 6/5/09
pH Meter/Serial #								
		Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Initial Calibration	97F0020	6 AC 8:15	4.0	7.0	10.0	1000	109	/
Calibration Check	0 , , ,	AB 8:15	4.0	7.0	10.0	1000	109	
Calibration Check	0280985	AB 8:15	4.0	7.0	10.0	1000	109	
Turbidity Meter/Seri	al# LEA#	5	_					
		Time	0 NTU	20 NTU	100 NTU	800 NTU		
Initial Calibration	3522	9:60						
Calibration Check	3521	9:00						
Calibration Check	3519	9:00						
PID Meter/Serial #								
Se be granica in		Time	Standard	Meter Reading	Zero with			
Initial Calibration								
Calibration Check					<u> </u>			
Calibration Check								
Balance/Serial #								
Initial Calibration		Time	Standard	Balance				
Calibration Check	100			_				
Calibration Check								
Comments								
Field Personnel	Nate Emmons Rich D'Amico		Sophia Kim				Signature Nathen	Ennow



Project Location	Ţ		W Willow	pond Quar i, East Hari						Dat	te <u>6/5/0</u> ole Time]2:
Client				ivision - JT							
Monitoring	Well Nu	mber U	UT-MW	-40	Samp	le Numbe	er(s) 1123	3436		234360	f
nitial Field I Depth of We Depth to Wai Height of Co Well Casing Protector Ground to R Comments	ter lumn Diameter	17.75 12.25 . , ,	<u>'</u>	Reference PID/FID F Interface Materia	Reading	Yes/No PVC		Casing Collar Cover	Conditions Secure Intact Locked (describe	on Ok	ghter / Heavie
evelopment	Informa	ation									
Parameter	Water	Pump Setting	(mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:35 11:35 11:55 12:00 12:05 12:15 5 ample	12.25	300	1.50 1.50 1.50 1.50 1.50 1.50 1.50	4.50 6.00 6.75 7.50 8.25	15.21 15.10 14.94 14.91 14.90 14.90	4567 4567 4568	6.06 5.92 5.89 5.89 5.88	-136.1 -133.1 -130.9 -127.5 -125.9 -125.8	0.69	2.01 1.82 1.61 1.44 1.37 1.35 1.38	Pumpit 9
Developemen Sample Field		nt If any	ambiguit	y could exi e appropria	st, be sur	e to indi	cate the f				
ield Deconta Vaste Contai dditional Co	ner ID	1? Ye	es/No 1130	The second second	with what	?					
eld Personne	-	ate Emn			Sophi	a Kim			Sign	gtuze	uaen A



LEA Comm. Project Location Client	U P	&W Eas	W Willow at Hartford	pond Quar l, East Har vision - JT	tford, CT					Dat	e 6/5/0 e 6/5/0 ole Time <u>/4</u> :
Monitoring	Well Nu	mber	WT-m			le Numbe	er(s) 1123	437	1	123437	up
nitial Field I Depth of We Depth to Wai Height of Co. Well Casing Protector Ground to R Comments	ll de le	25.2 /0.0 I Box St	0 5 /J ^{II} ickup	Reference PID/FID F Interface Materia	Used Reading		If ye	General Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	ghter / Heavie
evelopment		tion						les established			
Parameter Time	Depth to Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
3:10 3:36 3:46 3:50 4:00 4:05 4:05 4:5 4:20	10.05	300	50 30 30 50 50 50 50 50	7.5 8.25 9.00 9.25	14.08 14.09 14.09 14.01 14.05 14.06	6697 6509 6451 6447 6430 6448	5,99 5,88 5,86 5,85 5,85	46.6 196.0 257.0 279.2 289.3 290.4 291.6 290.8	13.56 13.49 13.45 13.50 13.43 13.34	3.24	Pumping
Developemen Sample Field	Treatmer	alique	ambiguit ot with the hain of Ci	y could ext e approprio ustody!	ist, be sur ite suffix	e to indici in the sar	cate the f				7.
Field Deconta Waste Contain dditional Co	ner ID	714	s/No //30	II Yes, \	with what						
eld Personne	- Committee	ate Emn			Soph	ia Kim			Sign	atures May C	mon



EA Comm. Project Location	U F	&W Eas	W Willow st Hartford	pond Quar l, East Har	tford, CT					Dat	e 7 of 6. e 6 / 5 / 0 ole Time 20 :
Client				vision - JT						1.0	. 0
Monitoring	g Well Nu	mber _	UT-MU	U-059	Samp	e Numbe	er(s) 1123	3427		123427	7U+
nitial Field Depth of We Depth to Wa Height of Co Well Casing Protector Ground to F Comments	ell nter olumn Diameter Road	/7.48 //.86 Box St	1b	Reference PID/FID F Interface Materia	Reading	Yes/&	of C S If ye	Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	ghter / Heavie
evelopmen	t Informa	ation									
Paramete	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum, Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
9:30 9:50 10:10 10:10 10:30 10:35 10:40 50:45 50:40	11.86 12.05 12.06 12.06 12.06 12.06 12.06 12.06 12.06	300	150 150 /00 /00 /00 /00 /00 /00 /00	3 4 5 6.5 7 7.5 8.5	14,83	3705 3648 3649 3649 3663 3667 3660	5.39 5.40 5.39 5.39 5.38 5.38	50.3 104.1 116.4 114.5 116.3	0.68	6.62 6.52 6.38 6.04 5.88	Pumping
Developement Sample Field		nt If any	ambiguit	y could exi e appropria	st, be sur	e to indic	cate the f				
rield Decont Waste Conta dditional C	iner ID	1? Ye	es/No 14130		with what	?	- 2 - 1				
eld Personne	and the same of th	ate Emm			Sophi	a Kim			Sign	afuzej Villaji G	· · · · · · · · · · · · · · · · · · ·





LEA Comm.		SUT907		pond Quar	terly GW	Mon.					e 8 of 12 te (0 5 /09
Location				d, East Har							ole Time 11:0
Client	F	ratt & W	/hitney D	ivision - JT	ot						
Monitoring	Well Nu	mber V	JT-MI	N-41	Samp	le Numbe	er(s) 1123	3434		1123	434 of
Initial Field I Depth of We	11	9.32	1	Reference PID/FID I			+ c				
Depth to Wat Height of Co.	lumn_ s	1,50	ì				o If ye	s, Depth		Li	ghter / Heavier
Well Casing Protector Ground to R	Road	Box/St	ickup	Materia	1	PVC		Casing	Condition Secure Intact	on OK	Bad
Comments								Cover	Locked	7	
	*								(describe	(e)	
Development		ition									
Parameter	Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1000	4.80	300	120	0		_				->P	BARGINE
10:20	*	1	1	2.4						2.28	
10:30	11-	-						66,6			
10:40	\/			4.8	13,22	2031	5.97	74,3	2,32	1,69	
10:50	-			(0)	1323	2032	5,96	76.3	2.46	2,19	
10:55	1			6.6	13,24	2034	5,95	77.3	2,78	1,21	
10:00	1/30	2	1.	72	13.29	2034	5.43	78,0	2,77	1.71	
113.05	-/	Y	2	7.8	13.27	2034	5,95	78.8	a .92	2.77	SAMPLE
	\					-					
		1									
						_					
						75	5				
-		_									
Developemen	t Method	Perieta	Itic Pupar	/ Railer /	Inertial D	umn / Of	her				
Sample Field		nt If any	ambiguit		st, be sur	e to indi	cate the f				
			hain of Ci		ue sujix	in the sur	npie ID c	m oom m	e sample	oome m	ei ana on
Field Deconta Waste Contain		0	s (120)	If Yes, v	with what	?					
Additional Co	omments	16,5"	Well Level	diame	eter pu	too rging	narn	N T	o Me	OSUR	
rield Personnel	-	ate Emm			Soph	ia Kim			Sign	ature	n



LEA Comm. Project Location Client	U P	&W Eas	W Willow t Hartford	pond Quar I, East Hart vision - JT	tford, CT		-			Dat	e 9 of 12 te 6/5/69 ple Time[3:10
Monitoring	Well Nur	nber 🗸	JT - A	1W-4	2 Samp	le Numbe	er(s) 1123	435		11234	35 UF
Initial Field I Depth of Wel Depth to Wat Height of Col Well Casing Protector Ground to R Comments	ter lumn Diameter Road	3,50 3,50 3,50 533 Box/Sti	5"	Reference PID/FID F Interface Materia	Reading	Yes / No	o If ye	General Casing Collar Cover	Condition Secure	on OK	ghter / Heavier C Bad
Development Parameter		tion				Cunn	1				
Time	Water	Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
12:50 12:20 12:20 12:30 12:40 12:50 42(3:00) 13:10	3.60		120	072 4 96 45.67 902	13,10 13,14 13,31 13,38 13,61 13,48	359 360 361	5,91 5,90 5,89	0.5 9.9 14.6 17.5 20.6 25.2 23.0	2.01 1133 1.11 1.27 1.34 1.37 1.39	3.11 2.74 2.31 3.31 3.62	SAMPLE
Developemen	t Method	Perista	Itic Pump	\Railer / 1	Inertial P	umn / Otl	ner				
Sample Field Field Deconta Waste Contain Additional Co	Treatmen mination; ner ID	t If any aliquo the Ch	ambiguit ot with the pain of Cu	y could exi- appropria stody! If Yes, v	st, be sur	e to indicing the san	cate the fi	n both th			
Field Personnel	2 1000	ite Emm			80phi	a Kim			Sign	ature BOL	



LEA Comm.		8UT907			taula CV	7.14					e 10 of 12
Project				pond Quar							te 6/5/09
Location				d, East Har						Samp	ple Time 🗷 :25
Client	P	ratt & V	Vhitney Di	ivision - JT	ot						
Monitoring	Well Nu	mber _	WT-MV	V-50	Samp	le Numb	er(s) 1123			and the second second	74380F
nitial Field l						2000		3439		1123	4390+
Depth of We		5.2		Reference		TOR					
Depth to Was		Z./		PID/FID I							
Height of Co.	lumn_ 3	3./		Interface	NIA	Yes / N	o If yo	s, Depth		Li	ghter / Heavier
Well Casing Protector Ground to R	Rose	Box (St		Materia	d _ 7			General Casing	Condition Secure Intact	on OK	Bad
Comments		1						Cover	Locked	-	
		-							(describe	9)	
evelopment	Informa	ition						Ome	(40001100	7	
Parameter		Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0915	N/A	350	100	0		ř.					- Intral
0970	1	1	1	ĭ	15.91	3912	6.87	-1501	0.10	30.7	1
0930					16.04	3974	6.83		0.01	15.1	
0940					16.06	3981	6.81	-142.8			
0950					16.09		6.81	-119.9		2.1	
1000					16:10	F2012 W. J.	6.81		6.18		
1010					16.11	9111	6.81	1513	0.10	3.9	
1015					16.12	4115	6.81	152.2		2.8	
1020				-	16.10	4114		-151.8			-
1025		-	1	7	16111	4112	6.82	157.1	6.18	2.9	Sunto
A	-				2011	""	0.00	126:1	0.60	21	2-11-
				6	/			-			
			-	150	9				/		
				4					-		
				/							
									0 100	_	
evelopemen	t Method	Periote	altic Pump	V Railer /	Inertial D	umn / Ot	her				
		-		/						•	
ample Field	Treatmen	alique		approprie							
ield Deconta Vaste Contain		? Ye	es (No)	If Yes, v	with what	?					
dditional Co	omments		lioute	Pine		-					
eld Personne	-	ate Emm			Soph	ia Kim			Sign	ature	
	R	ich D'An	nico		************					1/1	71/6



EA Comm. I roject ocation lient	Į. P	&W Eas	W Willow st Hartford	pond Quar d, East Har ivision - JT	tford, CT					Dat	e
Monitoring	Well Nu	mber \	NT-M	W44	Samp	le Numbe	er(s) 1123	844		11739	410F
Depth of We Depth to Wat Height of Co. Well Casing Protector Ground to R Comments	ter lumn Diameter Road	N/A		Reference PID/FID I Interface Materia	Reading	Yes/N		General Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	ghter / Heavier
Development Parameter						Spec.					
Time	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1335	NIA	350	100	0	12.10	721	53	341.7	4.87	21.2	Initial
1350					17.21	739	5.54	340.1	4.61	12.7	
1410					12.17	736	5.63	347.1	4.70	5.0	
1430 1435	+	+	+	1	12.17	740	5,67	3414	4.75	3.1	
1940	4	4	4	6	12.13	740	513	343.1	4.31	3.1 4.Z	Sample
										1	
	\					-1971					
-			-								1
		/	>								
Developemen	-			1							
ample Field	Treatmen	aliqu		e approprie							
Field Deconta		? Ye	s No) If Yes, v	with what						
dditional Co	omments	A	setel	heve va me	//	ndiru	tu	1.,	5 n	ott.	7
eld Personne	100	ate Emm	ions		Sophi	a Kim			Sign	ature	



LEA Comm. N Project	ι		W Willow	pond Quar						Date	2 of 12 e 6/5/09
Location				l, East Har		*				Samp	le Time 13:60
Client			2	vision - JT			(*)				
Monitoring V	Well Nu	mber \	WI-N	14/-45	Samp	le Numbe	er(s) 1123	84 90		11 7 34	1400F
Initial Field D		Measur V/4	rements	Reference	Lload	70	1				
Depth of Well Depth to Wate		LA		PID/FID F			2				
Height of Coli				Interface	N/A	Yes / No	1 If ve	- Denth		Lio	hter / Heavier
			11		3.5	air	,		0 1:4:	- Perpent	
Well Casing D Protector	Dameter	Box / St	z	Materia		000			Condition Secure	n OK	Bad
Ground to Re								Collar			
Comments		/		-					Locked		
		(Other (describe)	
Development 1	Informa	tion									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
	NA	350	100	0		()					Intal
1155	1	1			1368	579	5,85	210.1	1.72	15.6	
1205					13,41	561	5.80	271.6	1.70	10.2	
1215					13:38	564	5.41	747.5		8,4	
1225						571	5.29	271.2		5.6	
1735	-					510	5.27	791.4	1,0	4.9	
1745	-	_	+		13.37	507	5.75	299.6	1.66	3.1	
1750 1755	_				13.38	508 509	5.74	301.2		1.2	
1300	1	1		7	13,40		577	3071		7.8	Sample
1	₩				7.70	706		2021		2.0	
				-							
				_ (<i>)</i> }					/		
—									/		
	_										
	-								Variety Salva		
							-111112-3				7
Developement	Method	Perist	altic Pump	Bailer /	Inertial P	ump / Ot	her				
Sample Field T	Freatme	aliqu	ot with the	approprie	ist, be sui ate suffix	re to indic in the sai	cate the f mple ID o	ield treati on both th	nent app e sample	lied to eac bottle lab	h sample el and on
			hain of Ci								
Field Decontar Waste Contain		1? Y	es / No		with what						
Additional Co	mments		wate.	1 180	ne/	+s	lurge	to	900	+ down	~
ield Personnel		ate Emn	1		Soph	ia Kim			Sign	uture	1
	(K	ICILDAI	inco						/	//	1//



CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

495 TECHNOLOGY CENTER WEST • BUILDING ON MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:	

ACCUTEST QUOTE #:

KB2/2m9-453

	CLIENT INFOR	MATION			FACI	LITY INFO	TY INFORMATION								AN	ALYTIC	AL INF	ORMAT	ON		MATRIX CODES
SEND REPORT T	Robin 1		062 ZIP	PROJECT	8	d Gu East BUT			PRE	SER	VATI	ON	1/0/Cs 8260	1000	CB3 8082	15 KCR118 + Culd Zu					DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
SAMPLE #	FIELD ID / PO	INT OF COLLECTION	ON	DATE		SAMPLED BY:	MATRIX	# OF BOTTLES		HNO3					ă	Meta					LAB USE ONLY
-	1123427			6/5/09	9 10:45	NE	Ga	6	3		4	6	Х	X	X						
-	1123 427	119			15:45			2		X		1				×					
-	1123436				12:15			6	2		L	6	¥.	X	X						
	1123 436	of			12:15	NE		1		1		1				X					
-	112343	7			14:20	AK		6	10		L	6	X	X	X						
-	112343	7 0 +			14:20	-		1		1000		1				X					
-	1123 43	4			11:05	5ĸ		6	2		4	6	×	×	X						
-	1123 43	y uf			11:05	SK		1		1		1				X					
-	1123 43	5		6	M 13-10	SK		62	2		4	6	X	X	X						
	112343	70 E		V	13:10	5K		-		1		į				X					
~	. 11234	43		Cd5/09	8:30	NE		1	1				X								
	DATA TURNAROUNI				DATA DEL	IVERABL	E INF	ORMA	TIOI	4						Q A	COM	MENTS	REMA	RKS	Contract of the
☐ 7 DAYS ☐ 48 HOUI ☐ OTHER 14 DAY TURN	REMERGENCY			☐ DISK	NDARD IMERCIAL "E (DELIVERAL TE FORMS IER (SPECIF))					3			Pen		1.00	† 12 	ACP		PCB POTE	H
DEL INCLUSIVE		SAMPLE CUSTODY		1 - 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	NTED BELOW		ME SA	the state of the state of the state of	1	HANG	E P		SIO		CLUE		URIER		RY		hart and
1. n/ath	BY SAMPLER:	6/5/09 15:30		· nla	wife.	2.										2.					
RELÍNQUISHED	BY:	DATE TIME:	RECEIVED I	BY:	1	4.	NQUISH	ED BY:				DA	TE TI	ME:		4.	VED BY:				
RELINQUISHED	BY:	DATE TIME:	RECEIVED I	BY:		SEAL							P	RESER	RVE W	HERE APP	LICABLE			I ICE	TEMPERATURE



HAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCIE	TEOT	IOD	
ACCU	IESI	JUD	-

ACCUTEST QUOTE #: KB2/2009 - 453

OF THE REAL PROPERTY.	CLIENT INFORMA	TION			FACILITY INFORMATION						ANALYTICAL INFORMATION MATRIX CO					MATRIX CODES							
ADDRESS CITY, SEND REPORT TO PHONE #	LEA 100 Northwes Plainuille C Robin Mc 0: (860) 747	T 060 E Kinney	©2 ZIP	LOCA	ATION JECT N	N POND IAME FIN SIO.	Eas BUT	90	7	V	ESER	VATIC	- - - -	100,820	I FIPH	(Bs 8082-	Metals ACRAS+Cn WiZn			4	21.0	8	DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
SAMPLE #	FIELD ID / POINT	OF COLLECTION	ON	DA	TE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	E E	HNO3	HZSO4	33		5	9	X		1				LAB USE ONLY
-	1123444			6/2	5/09	14:30	WE	Gui	1	2	est.	4	6	X.	X	X							
	1123444	uf		- 1	1	14:30	NE		1	-	1		-			1	X			*			
	1123441			149	a Weigh	14:40	RD	\Box	6	2	- 1	4	6	X	V	×							
_	11 23 44					14:40	AD	7	1		1	1	1	-			X	1					
	1123438					10:25	RD		6	2	1	4	4	X	V	X		+			•	4	
-	1123438		-			10:25	RP		1		1	+	1		/-		·V	+					
	1123.43				*24:	10:25	RD	74	6	2	+:	4	6	X	V	V		1					
-	1123 43			\vdash		10:25	RD	H	1	3	0 1	+	1	/	/-		X	1					1
-	112344		8	1		13/00	RD	W	6	(7)		4	6	X	V	X							
7	112344			(15	09	13:00		Gu	—	1	1		}				X						
i.				4	1	1			1				1										
C SERVICE F	DATA TURNAROUND IN	FORMATION			948	DATA DEL	IVERABL	E INF	ORMA	TIOI	N I		15.16			NE S		CO	MMEN	ITS/R	EMA	RKS	Family 17, 18, 19
14 DAYS 7 DAYS 48 HOUF OTHER	S STANDARD A B RUSH R EMERGENCY AROUND HARDCOPY, EME B PREVIOUSLY APPROVED	PPROVED BY:	SH IS FAX		STAND COMMI DISK D STATE DTHER	ARD ERCIAL "B ELIVERAE FORMS I (SPECIFY	SLE S			*				Pr	ov	:de	CT	Par	CP	VO R	C Lep	PC	·
DEL INOLUCIONES		PLE CUSTODY	MUST BE	150000000000000000000000000000000000000	MENTE	BELOW	A COLOR OF THE PARTY OF THE PAR	ME SA		S CI	HANG	E PO	-	SION TE TIM	-	CLUD	_	URIE!		IVER	Y	(6-4	
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RELINQUISHED 5	BY: DAT	TE TIME:	RECEIVED E	BY:			SEAL			71		100	31	PRI	ESER	VE WH	ERE APP		E			N ICE	TEMPERATURE C



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

EA Comm. No.	88UT907.001	laumand Ouant	tork CU	/ Ma				Page of 7
Project	UTC P&W Will				n.			Date 9 /09
ocation	P&W East Harti							
Client	Pratt & Whitney			1		. 011/1/2	A 1	hennal
arrived at Site	800 D	Departed from S	Site 15	15	Vehi Odom	cle GMCVa eter (Start)Re		An onal
Soil Sampling		Geoprobe Worl	k		Current P	roject Information	-67	UIW
Groundwater Samp	oling	Concrete Corin	g		Last San	ple Number Used		
Surface Water Sam	npling	Construction			Last Loc	ation ID Used		
Vapor/Air Samplin	ıg	Waste Manager	ment		Current 1	ocation (if not comple		
Concrete Sampling	3				Sampling	g for	1	LOCK, PCBG, ETPHIN
Other Sampling		Inspection			Laborato	ries used	Į,	Contest
Other Sampling		Site Walk Over			Paperwo	rk & Equipment left at	/in	
		Surveying			Site Con	tact		Jeff Thompson
Well Development		Other (Describe	e)		Contract	ors on Site		Jall market
on-productive Time		1			H. (3	cimm, R. Vu	Men	uski
None		Weather				place to meet contrac	tora	wki 8:00,
Equipment Breakd	own	Missing Equipr	ment		Gate	by Willow	-60	0/2
Late		Other (Describe	e)			30 1		
uality Assurance Check	ks	1			Residuals Dispo	osition		
Yes N/A No					Item	Approx. Amount	(Container ID
Sampl	le labels complete				Soil/Solid	2	4.659	ul.
Sampl	le/cooler seals OK				Groundwater	~20 Litera	7	14130
All sar	mples obtained				Decon Fluid	7 21.40	1	1 1100
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All for Site of Site H Instrument of the Site of Site H Instrument of the Site H Instrument of t	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) 5 Gallon	Temperature Comments	low	Equ	Other Precipitation ipment Used Item Generator 3500 Meter, Conducti Meter, pH/Temp	Watt		LEA Number
All for Site of Site H Instrument of the Site of Si	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024	low	Equ	Other Precipitation ipment Used Item Generator 3500 Meter, Conducti Meter, pH/Temp	Watt vity mall Tools & Equipme		LEA Number 153 022 021
All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	Other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristaltie	Watt vity mall Tools & Equipme	ent	LEA Number 153 022 021 152 073 040
All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007	low	Equ Qty	Other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi	Watt vity mall Tools & Equipme	ent	LEA Number 153 022 021 152 073 040 201
All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi Pump, Watera	Watt vity mall Tools & Equipme	ent	LEA Number 153 022 021 152 073 040 201 038
All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	Other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi Pump, Watera Turbidimeter	Watt vity mall Tools & Equipme (spec. Master or Isco)	ent	LEA Number 153 022 021 152 073 040 201 038 023
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All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind	Watt vity mall Tools & Equipme c (spec. Master or Isco) ble Photovac 2020 (PID) icator	ent	LEA Number 153 022 021 152 073 040 201 038 023 012 028
All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind	Watt vity mall Tools & Equipme (spec. Master or Isco) ble Photovac 2020 (PID)	ent	LEA Number 153 022 021 152 073 040 201 038 023 012
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All for Site of Site o	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind	Watt vity mall Tools & Equipme c (spec. Master or Isco) ble Photovac 2020 (PID) icator	ent	LEA Number 153 022 021 152 073 040 201 038 023 012 028
All for Site of Site H Instrument of the Instrum	rms/logs complete condition OK l&S Plan on site ments calibrated pecify size) Gallon h & Safety Items	LEA 090 086 024 060 007 008	low	Equ Qty	other Precipitation Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submersi Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind	Watt vity mall Tools & Equipme c (spec. Master or Isco) ble Photovac 2020 (PID) icator feter w/Flow Cell	ent)	LEA Number 153 022 021 152 073 040 201 038 023 012 028



DAILY FIELD REPORT

Supplemental Sheet

Loureiro Engineering	g Associates, Inc.	Supplemental Sneet
LEA Comm. No.	88UT907.001	Page Z of Z
Project	UTC P&W Willowpond Quarterly GW Mo	
Location	P&W East Hartford, East Hartford, CT	7+07
Client	Pratt & Whitney Division - JTot	
Description of Site		
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1		
Field Personnel	Heather Grimm	Signature Lynn
rieid Personnei	Robert Zurkowski	THOU HOLD MILLIAM
	RODEIT ZUIKOWSKI	Humanami -



DAILY FIELD REPORT CALIBRATION RECORD

LEA Comm. No. Project	88UT907.001 UTC P&W Willowpond Qua	arterly GW Mon			and the second s	Pag	te $\frac{3}{9}$ of $\frac{2}{9}$
Location	P&W East Hartford, East Ha					Da	·
Client	Pratt & Whitney Division - J						
pH Meter/Serial #							
Initial Calibration	Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Calibration Check							
Calibration Check							
Turbidity Meter/Seri							
Initial Calibration	Time	0 NTU	20 NTU	100 NTU	800 NTU		
Calibration Check							
Calibration Check			1 1		-		
PID Meter/Serial #							
	Time	Standard	Meter Reading	Zero with			
Initial Calibration							
Calibration Check							
Calibration Check		-12 ¹²	4 1 4 - 114 - 114 - 114	18			
Balance/Serial #							
Initial Calibration	Time	Standard	Balance				
Calibration Check							
1 (300.0770.00.340.440.074V1-100.03440.0007410.00074		_	2				
Calibration Check	7 <u></u>						
Comments							
Field Personnel	Heather Grimm					Signature (nl ·
TOTAL OF THE MANAGEMENT	Robert Zurkowski					Pertha	21 Shaw



FIELD SAMPLING RECORD

MONITORING WELL INVENTORY

Loureiro	Engineering	Associates,	Inc.
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Page _ 88UT907.001 LEA Comm. No. Date 9 / 9 / 69 UTC P&W Willowpond Quarterly GW Mon. Project P&W East Hartford, East Hartford, CT Location Client Pratt & Whitney Division - JTot Predicted Depth Actual Depth Reference PID/FID Time Comments Sample ID Location ID of Well to Water of Well to Water Elevation 14.40 8.56 WT-MW-47 TOR 2233034 18.12 jo.82 7.54 3.78 2233035 WT-MW-57 WT-MW-48 2233036 9.90 WT-MW-195R 12,22 2233037 STAFF WT-MW-45 2233038 8-29 13.71 2233039 WT-MW-46 12.70 6.20 2233040 W7-MW-49 WT-MW-44 WT-MW-43 7.52 2-24 2233041 13.65 9.00 2233042 11.90 2233043 3.45 8.78 WT-MW-42 2233044 10.40 4.30 1.85 11.81 2233045 UNIDENTIFIED WT-MW-41 2233046 9.42 2233047 WT-MW-50 5.28 17.79 11.75 WT-MW-40 WT-MW-59 2233048 11.67 2233049 17.95 2233050 WT-MW-58 Heather Grimm Field Personnel Robert Zurkowski



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

EA Comm. roject ocation lient	No. 88UT907.00 UTC P&W V P&W East H Pratt & White	Villowpo artford, I	East Hartf sion - JTo	ord, CT			age 5 of 7 pate 9/09
Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
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eld Personne	el Heather Grim Robert Zurko					Signature	de thi



LEA Comm. No. Project	88UT907.001 UTC P&W Willow	mond Quart	erly GW	Mon				Page	e 4 of 7	
Location P&W East Hartford, East Hartford, CT San Client Pratt & Whitney Division - JTot										
	Number WT-M			le Numbe	er(s) 1130	880	1	13088	ouf	
Depth of Well Depth to Water Height of Column Well Casing Diamet Protector Ground to Reference Comments	10.82 7.30 ter 1.5"	Reference PID/FID R Interface Material	eading	TOC Yes (No) If ye	Collar Cover	Condition Secure	on OK	ghter / Heavier Bad	
Development Inform	nation									
Parameter Depth t Water		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment	
9:16 10.86 9:45 11.15 9:55 11.15 10:05 11.15 10:35 11.16 10:35 11.16 10:55 11.16 11:05 [1.0]	350 150	0.0 5.5 5.0 5.0 5.0 5.0 5.0 5.0 5.0 5.0	19 19 19 19 19 19 19 19 19 19 19 19 19 1	3247 3247 3341 3341 3341 3341 3341 3341 3341 33	100 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0	9377549 -1519751-15197558	a 000 000 000 000 000 000 000 000 000 0	140.0 140.0 128.1 12.3 12.3 14.0 12.3 14.0 12.3 14.0 12.3 14.0 12.3 14.0 12.3 14.0 12.3 14.0 12.0 12.0 12.0 12.0 12.0 12.0 12.0 12	Ph.	
Developement Meth	od Peristaltic Pum	p / Bailer / I	nertial P	ump / Ot	her			וווונונ		
Sample Field Treatn	nent If any ambigui aliquot with th the Chain of C	ty could exis e appropria	st, be sur te suffîx	e to indic in the san	ate the f					
Waste Container ID	714130	11 103, W	idi wiidi							
Additional Commen	its						f			
Field Personnel	Heather Grimm Robert Zurkowski						Sign	ature	hunn	



LEA Comm. I Project Location Client	U P	&W Eas	W Willow t Hartford	pond Quar l, East Har ivision - JT	tford, CT					Page Dat Samp	
Monitoring				^		le Numb	er(s)1130)879		13087	luf
Initial Field ID Depth of Wel Depth to Wat Height of Col Well Casing I Protector Ground to Re Comments	er 8. lumn 5. Diameter Road	4,40 56 84	ickup	Reference PID/FID F Interface Materia	Reading	TOC Yes/N	o) If ye	Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	ghter / Heavier
Development		tion									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
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Developement Sample Field		alique	ambiguit	y could exi e approprie	ist, be sur	e to indi	cate the f				
Field Deconta Waste Contain		? 141°	s (No	If Yes, v	with what			Was	Test		
Additional Co	omments	X	Notr	Neasu	ed to	due	yasi di	amet	1	N.	1
Field Personnel		eather G	7.5						Sign	aturk W	Luin



MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST	JOB	
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ACCUTEST QUOTE #: KBA 2009-453

AT THE REAL PROPERTY.	CLIENT INFOR	MATION		FACILITY				FORMATION							ANA	ALYTI	CAL	NFOR	MATIC	N		MATRIX CODES
NAME UD NOTHWEST DIVE ADDRESS CITY, STATE ZIP SEND REPORT TO: PHONE # 840-747-4181				PROJECT NAME WATE WIN THEY E A IT HANTFOLD, CT LOCATION PROJECT NO. PROJECT NO.						-	(5 874006	TPH HOTE	£808 50	PLPA & MPHILES/430					0	DW - DRINKING WATER GW - GROUND WATER WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID		
ACCUTEST SAMPLE #	FIELD ID / PO	INT OF COLLECTI	ON	DATE		SAMPLED BY:	MATRIX	1 M L	_	_	H2SO4	_	100	5	PCP	Total					107	LAB USE ONLY
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Manager 1	DATA TURNAROUNI	INFORMATION			DATA DEL	IVERABL	E INF	ORMA	TIO	1				1	T		С	ОММЕ	NTS/F	REMAR	KS	
14 DAYS STANDARD APPROVED BY: 7 DAYS RUSH 48 HOUR EMERGENCY OTHER 14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED			SH IS FAX	STANDARD COMMERCIAL "B" DISK DELIVERABLE STATE FORMS									9	alyt	ical de (Tist	cfov	(NO)	(si			
and the	THE RESERVE AND ADDRESS OF THE PARTY OF THE	AMPLE CUSTODY			D BELOW		Contractor of the Contractor	-	S CI	HANG	E PC		SION		CLUD		CEIVED		ELIVEF	RY		
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RELINQUISHED	And the second second	DATE TIME:	RECEIVED BY:			RELII	NQUISH	ED BY:				DA	TE TIN	Æ:		REG	CEIVED	BY:				
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DAILY FIELD REPORT

Location P&W East	NAMES OF STREET	Hartford, C		on.		Page of [7] Date 9 / 10/200
Arrived at Site Site Activities Soil Sampling Groundwater Sampling Vapor/Air Sampling Concrete Sampling Other Sampling Other Sampling Well Development Non-productive Time None Equipment Breakdown Late	Departed f Geoprob Concrete Construc Waste M Inspectio Site Wall Surveyin Other (D	e Work Coring ction Inanagement on k Over g escribe)	711	Current P Last San Last Loc Current I Sampling Laborato Paperwo Site Con Contract	reter (Start)Re roject Information riple Number Used ation ID Used Location (if not complete g for ries used rk & Equipment left at/in	Visiputals TPH PC Accorded Office Jeff Thampson Lows Ki
Quality Assurance Checks Yes N/A No Sample labels completed Sample/cooler seals Of All samples obtained Chains of custody All forms/logs completed Site condition OK Site H&S Plan on site Instruments calibrated Checked By	ok ete Weather Tempera	-100	2	Residuals Dispo Item Soil/Solid Groundwater Decon Fluid PPE Other Precipitation	Approx. Amount Approx. Amount Mulgalland Wir	Container ID 7 14130
			122			
Expendable Items Used		I. a		ipment Used		L =
Qty Item		LEA Number	Qty	Item		LEA Number
Bailer, Disposable (specify size)		090		Generator 3500	(CO) (CO) (CO)	153
Drum, Closed Top 55 Gallon Filter, In Line		086 024	-	Meter, Conducti		022 021
Miscellaneous Health & Safety Items		060	1	Meter, pH/Temp	mall Tools & Equipment	
Tubing, 1/24, NOS	20	007	+	Pump, Grundfos		073
8 Tubing, 3/8", NOS-POLY		008	1	The second secon	c (spec. Master or Isco)	040
Water, Distilled		025	100	Pump, Submersi		201
				Pump, Watera		038
			2	Turbidimeter		023
			T		Photovac 2020 (PID)	012
			12	Water Level Ind		028
			0.	Water Quality M	leter w/Flow Cell	070
	11-21		0	421		
					٨	. 01
Field Personnel Heather Grin Robert Zurk			-		Signatu	the Juin



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

LEA Comm. I Project Location Client	No. 88UT907.00: UTC P&W V P&W East Hi Pratt & Whiti	Villowpor artford, E	ast Hartf	ord, CT	Mon.	Page Date C	2 of 12 1/10/09
Sample ID	Location ID	Time	Sample Type	Depth (ft)	PID/FID Reading	Comments	Waste Cont. ID
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Field Personnel	l Heather Grim					Signature &	-
riciu Personnei	Robert Zurko					The state of the s	Mus



DAILY FIELD REPORT CALIBRATION RECORD

LEA Comm. No. Project Location Client	88UT907.001 UTC P&W Willowpond Quarte P&W East Hartford, East Hartford Pratt & Whitney Division - JTo	ord, CT				Pag Da	
pH Meter/Serial # Initial Calibration Calibration Check Calibration Check		pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Turbidity Meter/Seri Initial Calibration Calibration Check Calibration Check	Time	0 NTU	20 NTU	100 NTU	800 NTU		
PID Meter/Serial # Initial Calibration Calibration Check Calibration Check	Name of the latest and the latest an	Standard	Meter Reading	Zero with			
Balance/Serial # Initial Calibration Calibration Check Calibration Check	Time	Standard	Balance				
Comments							,
Field Personnel	Heather Grimm Robert Zurkowski					Signuture Heath	a Jain



DAILY FIELD REPORT

Supplemental Sheet

Loureiro Engineeri	ng Associates, Inc.	Supplemental Sheet
LEA Comm. No.	88UT907.001	Page U of C
Project	UTC P&W Willowpond Quarterly GW Mon.	Date 0 / 10/09
Location	P&W East Hartford, East Hartford, CT	,
Client	Pratt & Whitney Division - JTot	
Description of Sit	e Activities	
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1420 Flanc	a over samples to Benny	
WCW	e Management 1	
140 Offsi	te '	
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	W 1 0:	4. 10 0/
Field Personnel	Heather Grimm	Signatula VIII
	Robert Zurkowski	Health Full
		/1



EA Comm. Project	U		W Willow	pond Quar l, East Har							e 5 of 1 te 9 /10 / 09 ole Time 9 :
Client				ivision - JT						Dum	oie Time <u>7</u>
Monitoring '	Well Nu	mber /	vī-MW.	41	Samp	le Numb	er(s) 1130	878		113087	80f
Depth of Wel Depth to Wat Height of Col Well Casing I	l 9.0 er 4.5 umn 5.	42 30 12		Reference PID/FID F Interface Materia	Reading	Yes/N	7 If ye		Condition		ghter / Heavie
Protector Ground to Re Comments	CRoad	BOX St	ickup					Collar Cover	Secure Intact Locked	X	
								Other	(describe	e)	
Parameter	Informa Depth to Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)		pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
Time 8:30 8:40 8:50 9:00 9:10 9:12 9:25 9:30	4.30	9300	120	START 1.2 2.4 3.6 4.8 6	PURG 15.78 15.89 15.88 15.99 16.02 16.05	(us/cm) NG 1345 1333 1331 1324 1328 1325	5.68 5.68 5.67 5.67 5.67 5.67	143.0 85.0 79.2 92.5 82.4 83.6 82.8		1.66	5.2 5.0 4.2 5.3 4.8 4.3 4.6
Developement Sample Field Field Deconta Waste Contain	Treatmer mination	nt If any alique the Ci	ambiguit ot with the hain of Ci	y could ext e approprioustody!	st, be sur	e to indicing the said	cate the f				
dditional Co	mments		rimm						Sign	ature 1	14.



FIELD SAMPLING RECORD

LOW FLOW WELL SAMPLE

LEA Comm. Project		SUT907	0.5.70	pond Quar	terly GW	Mon				Page	e 6 of 2 te 9/10/09
Location				l, East Har							ole Time // :40
Client				vision - JT	The State of the S					Samp	ne Time <u>11 .90</u>
Monitoring			75.52			le Numbe	er(s) 1130	881		113088	3108
Initial Field I Depth of We Depth to Wat	11 13	-65	rements	Reference PID/FID F	Used Reading	TOR					ghter / Heavier
Depth to Wat	lumn 4.	65		Interface		Yes / No) If ye	s, Depth		Li	ghter / Heavier
Well Casing Protector Ground to R Comments	Diameter Road	Box) St	ickup	Materia	I PUC			Casing Collar Cover	Secure	on OK	S Bad
Development	Informa	ation									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	- , ,	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	LOG6 Comment
10:40	9.00	300	120	START 1.2	PURC	ING -		117.0		. 0	7
10:50				1.7	15.51	573	5.03	11/./	0.75	1.95	7.5
11:00				3.6	15.57	569	5.62	117.7	1.8/	1.77	19.7
11:10				4.8	15.48 15.50	571	5.58	127.8	1.27	1.85	13.6
11:30				4.0	15.51	567	5,59	120.0	1.26	1.60	11.6
11:35				6.6	15.50	566	5.59	21-6	1.28	1.60	11.3
11:40	V	V	1	7.2	15.51	564	5.59	120.9	1.27	1.55	11.8
						\					
						1					
							10				
-	_	/					(2)				
							CX				
	/						1				
										/	
D	. 3.6-4	IC D	le: D	N/D '1 /			1		_		
Developemen									-	Ser 1200	
Sample Field	Treatme	alique		appropria							
Field Deconta Waste Contain		? Ye	es / No	If Yes, v	with what	?					
Additional Co	omments										
Field Personne	100	eather G							Sign	ntuye G	4.
	R	obert Zu	rkowski						-/1	y Si	7-4



LEA Comm. Project Location	L P	&W Eas	W Willow st Hartford	pond Quar d, East Har ivision - JT	ford, CT					Da	te 7 of 10 tte 9 1/0 109 ple Time 13 0
Monitoring	Well Nu	mber 4	1T-MW.	-46	Samp	le Numb	er(s) 1130	882		113088	320f
Depth of Well Depth to Wat Height of Col. Well Casing Protector Ground to R Comments	ter 6 lumn 6. Diameter Road	20 50 Box/St	ickup	Materia	Used Reading	Yes /N	F If ye	General Casing Collar Cover	Conditions Secure Intact Locked (describe	on OI	ighter / Heavier K Bad
Development		tion	т				1				
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Gommunt.
12:00 12:10 12:30 12:30 12:40 12:55 13:55 13:00	6.20	360	120	57ART 1.2 2.4 3.6 4.8 6.6 2.2 7.8	17.36 17.30 16.89 17.21 17.24 17.19 17.10 17.12	366 366 361 360 359 359	5.08 5.09 5.08 5.08	158.8	1.65 1.49 1.59 1.39 1.41 1.59 1.62 1.58	1.60 1.58 1.46 1.32 1.30 1.27 1.25 1.19	17.1 15.0 16.6 14.5 14.8 16.7 16.8 16.5
Developemen				/			000000				
Sample Field Field Deconta Waste Contain dditional Co	amination ner ID	alique the C	ot with the hain of Co es / No	e appropria ustody!		in the sa					
ield Personne		eather G	rimm rkowski						Sign	ature Cu	4.



LEA Comm. I Project Location Client	U P	&W Eas	W Willow st Hartford	pond Quar l, East Har ivision - JT	tford, CT						e 8 of 10 te 9 1/0 109 ple Time 14 :49
Monitoring	Well Nu	mber 4	IT-MW-	48	Samp	le Numbe	er(s) 1130	883		1130883	3vf
Initial Field II Depth of Wel Depth to Wat Height of Col Well Casing I Protector Ground to Re Comments	er 3. Jumn 3.	54 78 76 1	,,	Reference PID/FID I Interface Materia	Reading	TOR Yes/No		Casing Collar Cover	Conditions Secure Intact Locked (describe	on Ok	ghter / Heavier K Bad
Development	Informa	ation									
Parameter		Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	PO90 Comment
13:45 13:55 14:05 14:15 14:35 19:40 14:45	3.78 4.88 4.88	300	120	START 1.2 2.4 3.6 4.8 6.6 7.2	PUR 20.09 20.71 20.82 20.97 20.83 20.80 20.88	31NG 719 750 749 750 744 742 742	6.20 6.23 6.24 6.26 6.26 6.26	456.9 47.9 53.6 55.8 50.5 55.3 57.9	0.23 0.20 0.16 0.16 0.16 0.16	7.09 6.91 2.26 2.78 2.59 2.36 2.32	2.5 2.3 1.7 1.8 1.8 1.9 1.8
Developemen	t Method	Perist	altic Pumi	Bailer /	Inertial P	ump / Ot	her		-	-	
Sample Field Field Deconta Waste Contain Additional Co	Treatment mination ner ID	nt If any alique the C	ambiguit ot with the hain of Co	ty could ext e approprioustody!	ist, be sur	e to indici in the sai	cate the f				
Field Personnel		eather G	rimm rkowski						Sign	agure Ju	4·



CEA Comm. Project Location Client	J I	&W Eas	W Willow at Hartford	pond Quar l, East Har ivision - JT	ford, CT					Page Date Samp	
Monitoring						le Numbe	er(s)1130	885		130885	uf
Depth of We Depth to Wa Height of Co Well Casing Protector Ground to R Comments	ter 3. All ter 3. All ter 5. All	78 ,20 ,58 , 1/211 Box / St		Reference PID/FID F Interface Materia	Reading	Yes /M	o If ye	General Casing Collar Cover	Condition Secure	on OK	hter / Heav Bad
evelopment		ation									
Paramete	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
8:35	3.20	350	100	0.0		FRT!	PURG	ころに	1	2 74	
8:55	**	1	100	2.0	14.18	159	5.40	150.6 152.8	0:11	3.07	
9:15	×	\vdash	100	3.0	16.63	264	5.57		0.17	2.19	-
9:20	*		100	15	16.69		5.56		0.37	-2.0	
9:23	*	V	100	4.8	16:26	248	557	161.5	0.39	2,17	
			10.5			2.5.0	3.31	1303			
					1	1					
					1	(0)					
				/	0						
										SAM	PLED
Developemen	nt Method	Perista	altic Pump	Bailer /	Inertial P	ump / Ot	her _			- 1111	
Sample Field Field Decontage Waste Contain	amination	alique the C	ot with the hain of Ci	appropria istody!		in the sar				lied to each	
Additional Co	omments		Jot M	easwe	d				Aign	aturk	
ria i orsonne		obert Zu			- 1				117.	Alox 2	In Min



FIELD SAMPLING RECORD

LOW FLOW WELL SAMPLE

LEA Comm. No	. 88U	T907.001							Page	10 of
roject		CP&W Willow							Date	The second residence
ocation		W East Hartfor			9				Samp	le Time 0:
lient		t & Whitney D		`ot						
Monitoring W	ell Numb	er WT-M	W-43	Samp	le Numbe	er(s)1130	1886	1	(3088b	ruf
nitial Field Da Depth of Well		easurements	Reference	Usad	TOC					
Depth to Water		55	PID/FID F	11	100				15	
Height of Colum	nn I	35	Interface	Caumg	Ves / No) If ve	s, Depth		Lio	hter / Heavie
				. ρ	Yes /No	11) 0				
Well Casing Di	ameter	130	Materia	11	VC			Conditio	on OK	/ Bad
Protector Ground to Refe		x / Stickup					Casing	Secure	V	/
Comments	erence _	100	-					Locked	-	
Comments								describe) —	
(6)	TEXT DES						Other	describe		
evelopment In	ıformatio	n		1						
		ump Purge Rate etting (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1020 -	1.553	350 100	0.0	. 5	TARI	POI	26,1N	16_		
1040	*	100	2.0	16.99	471	5.65	168.3	0.59	1,57	
1045	*	100	2.5	1,404	HIL	5.6	1608	Q.Laz		<i>x</i> 0.
1050 2	*	100	3.0	1, 4,01	714	0.10	Stell-	0.6	1.62	•
1050	*	100	3.5	1.4.10	771	3.40	160.4	0.04	2.01	
	-									
				/	1					
			/	116	1					
				110						
				1						
								_	1210	- 17
	F (1 1 P		10 11 11		100			5	4MME	
evelopement N										
ample Field Tr										
		aliquot with th		ite suffix	in the san	nple ID c	n both th	e sample	bottle lab	el and on
		he Chain of C		2001 Jan 14	-401					
ield Decontam		Yes (No)	If Yes, v	with what	?					
aste Container	r ID	414130								
dditional Com	ments									1
								- 1	1.	
ld Personnel		ner Grimm rt Zurkowski		-				Sign	ature M	IM M
	RODE	IT EMILOWSKI						LISTA	A /1101 X-10	UNIVIO



Location P&W East Ha	l Villowpond Quarterly GW artford, East Hartford, CT ney Division - JTot				e 0 /10/09 ble Time 13:11
Monitoring Well Number WT-	MW-49 Samp	le Number(s) 1130	0887	113089	87uf
Initial Field Data and Measurement Depth of Well 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Reference Used PID/FID Reading Interface Material	Yes/No If ye	s, Depth General Condit Casing Secure Collar Intact Cover Locked Other (describ	ion OK	ghter / Heavier Bad
Development Information					
	ge Rate Cum. Liters L/min) Purged (L) Temp (C)	Spec. Cond. (uS/cm) pH (SU)	ORP (Eh) DO (mg/L)	Turbidity (NTU)	Comment
13:50 2:13 350 1 12:10 2:44 1 12:10 1:70 1 12:30 2:70 1 12:30 2:40 1 13:50 2:46 1 13:00 2:46 1 13:05 2:46 1	10 0.0 10 2.4 9.46 10 3.4 10.11 20 4.8 10.11 20 6.0 9.72 00 7.0 9.0 00 9.0 9.0	21 5.85 379 5.85 381 5.85 288 6.01 288 6.01 288 6.01 293 6.05 293 6.05 295 6.10	GING 103.63 -1 51.229: 29.42.39: -34.62.18 -53.53.11 -51.34 -65.41.91	17.50 16.45 15.45 13.87 13.87 13.00 13.87 13.87	1.78 (mg/L)
	110				-
				SAM	PLED
the Chain	biguity could exist, be suith the appropriate suffix of Custody!	re to indicate the f in the sample ID o			
Field Decontamination? Yes Waste Container ID 74413	o If Yes, with wha	t?			
Additional Comments			1	٨	
Field Personnel Heather Grimm Robert Zurkov			Sign	nature (hunim



FIELD SAMPLING RECORD

LOW FLOW WELL SAMPLE

LEA Comm.	No. 8	8UT907	.001							Page	
Project				pond Quar						Date	- specific distance
ocation				l, East Hart						Samp	le Time \S:\
Client				vision - JT	ot					110 000	a (
Monitoring	Well Nu	mber W	TMN	1-45	Samp	le Numbe	er(s) 1130	888		1130888	sur
nitial Field I Depth of We		Measur	ements	Reference	Used	TOC					
Depth to Wa		. 84		PID/FID F							
Height of Co		.81	0	Interface	6	You No) If ye	s, Depth		Lig	hter / Heavier
Well Casing	Diameter	1/2"		Materia	1 PVC	the .		General	Conditio	on OK	Bad
Protector		Box / Sti						_	g Secure	V	
Ground to R	Reference	TO	<i></i>	-				Collar		N	
Comments									Locked (describe		
								Outer	(describe)	
Parameter						Spec.					
Time	Water	Pump Setting	(mL/min)		Temp (C)		pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1430	4.84	350	100	0.0	101.11	nr	1 11/0	-120-1	- 0 1 0	n di	
140	*	1	100	3.0	1010	705	10.40	-139.7	0.60	2.68	
N 55	*		100	5.5	BLB	山上	: 117	-1779	0:05	1.24	
1500	*		100	10.0	1845	414	0.40	140.0	0,13	1.79	
1505	*		188	6.5	18.55	714	6.34	-1'339	0.18	2.04	
1519	*	/		7.0	18.59	713	6.33	-1325	0.14	2.44	
1510	*	9	100	7.3	10,764	713	6.52	-13d.1	0.14	T'47	
					11	_					
				/_	1	1					
				1	10	1)					
				1		/					
		_									
									_ <	AMPI	a
evelopemen	nt Method	Perista	ıltic Pump	/ Bailer /	Inertial P	ump / Ot	her _				
ample Field	Treatmen	nt If any	ambiguit	y could exi	st, be sur	e to indic	cate the f	ield treati	ment app	lied to eac	h sample
		7.	ot with the hain of Ci	e approprio ustody!	ite suffix	in the sar	nple ID o	n both th	ie sample	bottle lab	el and on
ield Deconta	iner ID	71	s/No 430		with what	t?					
dditional C	omments	*10	ot me	dsured	d				570		
										A. 11	/
eld Personne	-	eather G obert Zu			-				Tign.	ature I	uh



CHAIN OF CUSTODY

495 TECHNOLOGY CENTEL ST • BUILDING ONI MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:		

KBLI 2009-453

CLIENT INFORMATION				FACILITY INFORMATION						ANALYTICAL INFORMATION							MATRIX CODES		
ADDRESS Plajavill CITY, SEND REPORT T PHONE #	hwest Pr	STATE ZIP PROJECT NO. FAX #						RTFORD OOI × M PRESERVATION					BS 8000		W. 4.				DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
ACCUTEST SAMPLE #	FIELD ID / P	OINT OF COLLECT	ON	DATE	TIME	SAMPLED BY:	MATRIX	BOTTLE	HNOS H	H2SO4	4	35	5	TOPO					LAB USE ONLY
,	11308	83ut		9/10/09	1445	KE				1	M			X					
,	113088			1110	924	1-16		200	1	1	K		1						
,	11308			-1	924	46		4	36	T	X	\V	X				1		
,	11308	854F		\neg	924	49		11	1	1	X		+	X		T	\top		1
,	11308	Ŷlo		AD.	1056	46		21	H			\checkmark		-		+			
,	11300	886			1056			u		++	O	7	X	\vdash	_	++	+		
,	1130	88lout			1054	HG		1		1		-	1	X	-	+	+		-
1.		887		-1	1311	H6	_	1-1	1	+	N		+	1	_		+	6.	
	1130	1880			1311	H6		u	++	+	121	X	1x	/	_	++	+	+	
,	1120)887ut			1311	46		1		1		+		V	-	++	+		-
					1011			1	X	+	N.		+	\sim	_	++	+		Э.
	1130	888			1519	He		10	70		1	<u> </u>							
4 3 5	DATA TURNAROUN					LIVERABLI	E INFO	ORMAT	ION			_				MMENTS			STREET, STREET
☐ 7 DAYS	S STANDARD S <i>RUSH</i> R EMERGENCY	APPROVED BY			ERCIAL "E							ALD ALD	VI CAR	+ p	RIP	anali	RCP	16981	for vols
☐ OTHER	IAROUND HARDCOPY	EMERGENCY OF RU	SH IS FAX	☐ STATE	FORMS R (SPECIF	Y)													
2011 107 4 4 CO 10 LD 0 20 CO 20	S PREVIOUSLY APPR	OVED	ma austusentato		7			N. Fale											
BELINOUISHE	BY SAMPLER:	DATE TIME: 16 44	MUST BE		ED BELOW		ME SA		CHAN	IGE PC		SION, I	NCLUI		COURIE		ERY		ENTER OF
1. Jan	K ANDLEH:	9-10-09	1. B	dul		2.	woishi	LU DI.			DAI	L HMG.		2.	JETTED D				
RELINQUISHED	BY:	DATE TIME:	RECEIVED B	IY:		RELIN	QUISH	ED BY:	-		DAT	E TIME:		4.	CEIVED BY	t:			
RELINQUISHED	D BY:	DATE TIME:	RECEIVED B	BY:		SEAL					1	PRES	ERVE W		PPLICABL	E	C	ON ICE	TEMPERATURE
5.			5.																c



CHAIN OF USTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

495 TECHNOLOGY CENTER WEST • BUILDING ONI MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:	
COLOR OF THE CASE	

ACCUTEST QUOTE #: | CB2 12 009 - 453

274 to 147 147	CLIENT INFO	RMATION	the Hora		FAC	LITY INFO	HMAI	ION	1		dr.		20.75	AN	ALYII	CAL IN	FORMA	HON	(4年76年)	MATRIX CODES
NAME 100 North ADDRESS \$16:00:116 CITY, ROB!	HYEST PRI W MCKIN	CT STATE	ZIP	LOCATION PROJECT N	BBUT	907.0	RIFO OI	RV	7			(c 82100B	35	PS 8087	ELLA SWITH + CO.					DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
ACCUTEST SAMPLE #	FIELD ID / P	OINT OF COLLEC	TION	DATE	TIME	SAMPLED BY:	MATRIX	. 44	A WATER	-	MONE		35	D(Total					LAB USE ONLY
	1130878			9/10/09	936	lt		1	X	П	Ty	X				\top				
	113084	8		1	930	RE		14			\ \ \ \		X	X						
	113084				930	RZ		1		X					X					
,	1130881				1140	RE		2	X											
•	113088				1140	RE		4			>	1	X	X						
	11308	81uf			1140	RE				X)	1			X					
	11308			(16)	1306	RZ		2	X			X								
	11308	8L			1305	RT		4		Ц.	X		X	X						
•	11308	82uf			1305	Kt		1		X	\rightarrow	1			X					
1	11308	383	-		1445	RE		2	X		X	X		-						
*	11308	183		1	1445	RZ		4			X	1	\rightarrow	X						
	DATA TURNAROUN	NAME OF TAXABLE PARTY.	B. Weinign		DATA DEI	IVERABLI	E INFO	RMA	TION			T	952			CO	MENT	S/REM	ARKS	and the second second
☐ 7 DAYS ☐ 48 HOUF ☐ OTHER ☐ 14 DAY TURNA	STANDARD RUSH REMERGENCY AROUND HARDCOPY PREVIOUSLY APPR	. EMERGENCY OR F		☐ DISK D	ERCIAL "I ELIVERA FORMS	BLE					-	-	for		de OCI Epov	+ 100	e (p	a Ma	lytic DVic	ul lists le CT
AAA	11.13	SAMPLE CUSTOR			D BELOW		IE SAN		S CH	ANGE		ESIC DATE 1		CLUE	-	OURIEF		/ERY		TO THE DESIGNATION
1. HAMMARED RELINQUISHED 3.	111	DATE TIME: 16:4	RECEIVED B	MU	/	2.	QUISHE					DATE		4	2.	EIVED BY:				
RELINQUISHED 5.	BY:	DATE TIME:	RECEIVED B	IY:		SEAL						5	PRESE	RVE WI	HERE AF	PLICABLI	E	(ON ICE	TEMPERATURE C



495 TECHNOLOGY CENTER WEST . BUILDING ONE MARLBOROUGH, MA 01752

TEL: 508-481-6200 . FAX: 508-481-7753

ACCUTECT IOD #.	
ACCUTEST JOB #:	

CLIENT INFORMATION FACILITY INFORMATION ANALYTICAL INFORMATION MATRIX CODES DW - DRINKING WATER NAME PROJECT NAME GW - GROUND WATER **ADDRESS** WW - WASTE Planville WATER SO - SOIL CITY, ZIP PROJECT NO. SL - SLUDGE OI - OIL LIQ - OTHER SEND REPORT TO: PHONE # 840 - 410-300 LIQUID FAX# SOL - OTHER COLLECTION PRESERVATION SOLID ACCUTEST SAMPLED FIELD ID / POINT OF COLLECTION SAMPLE # DATE TIME LAB USE ONLY BY: COMMENTS/REMARKS DATA TURNAROUND INFORMATION DATA DELIVERABLE INFORMATION M 14 DAYS STANDARD APPROVED BY: Z STANDARD ☐ COMMERCIAL "B" 7 DAYS RUSH **48 HOUR EMERGENCY** ☐ DISK DELIVERABLE ☐ STATE FORMS OTHER ☐ OTHER (SPECIFY) 14 DAY TURNAROUND HARDCOPY, EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY DATE TIME: 16:4 RECEIVED BY: RECEIVED BY: DATE TIME: RELINQUISHED BY SAMPLER: RELINQUISHED BY: 2. 2. RECEIVED BY: RELINQUISHED BY: RELINQUISHED BY: RECEIVED BY: DATE TIME: DATE TIME: RELINQUISHED BY: DATE TIME: RECEIVED BY: SEAL # PRESERVE WHERE APPLICABLE ON ICE TEMPERATURE 5. 5.



DAILY FIELD REPORT

Project Location Client	88UT907.001 UTC P&W Wi P&W East Har Pratt & Whitne	tford, East	Hartford, CT				Page _ Date _	0/10°	
Arrived at Site Site Activities	The second secon	Departed fi	om Site	74	5 Veh	icle GHLVAN,	PELLOM	al	
Samp All sa Chair All fo	mpling ing g nt down	Concrete Construct Waste Ma Inspection Site Walk Surveying Other (De	robe Work rete Coring ruction Management ction Valk Over ying (Describe) her ng Equipment (Describe)		Last San Last Loc Current Samplin Laborate Paperwo Site Con Contract	orics used ork & Equipment left at/in atact cors on Site MY M M C TWKOW d place to meet contractors	VUCS, ET ACCU-OFF	VICS ETPH metals p Acculest Office Jeff Thampson Ei	
Site I Instru	H&S Plan on site uments calibrated	Tempera	ture Mig	N b	[Precipitation	stight ain wind	d stil	gnt	
Site I	uments calibrated	Tempera	ture Mig	N W	\[Precipitation]	stight ain wind	il2 b	gnt	
Site I Instru Checked By	uments calibrated	Tempera	ture Mig		Precipitation	stight ain wind	d Cli	gnt	
Site I Instru Checked By Robin McKinn	uments calibrated	Tempera	ture Mig	Equi		stight ain wind	d Cli	LEA Number	
Checked By Robin McKin Expendable Items Used Qty Item Bailer, Disposable (s	specify size)	Tempera	ture MiQ ts	Equi	Item Generator 3500	Watt	d Cli	153	
Checked By Robin McKin Expendable Items Used Qty Item Bailer, Disposable (some property)	specify size)	Tempera	LEA Number	Equi Qty	Item Generator 3500 Meter, Conducti	Watt	d Cli	153 022	
Checked By Robin McKin Expendable Items Used Qty Item Bailer, Disposable (some price of the	specify size) 55 Gallon	Tempera	LEA Number 090 086 024	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp	Watt	d Cli	153 022 021	
Checked By Robin McKin Expendable Items Used Qty Item Bailer, Disposable (some price of the property) Filter, In Line Miscellaneous Healt	specify size) 55 Gallon	Tempera	LEA Number 090 086 024 060	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S	Watt ivity p Small Tools & Equipment	d Cli	153 022 021 152	
Site Instru Checked By Pobla McKen N Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos	Watt ivity p Small Tools & Equipment	d Lli	153 022 021 152 073	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti	Watt ivity p Gmall Tools & Equipment s c (spec. Master or Isco)	d Lli	153 022 021 152 073 040	
Site Instru Checked By Pobla McKen N Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007	Equi Qty	Jament Used Item Generator 3500 Meter, Conducti Meter, pH/Tem Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers	Watt ivity p Gmall Tools & Equipment s c (spec. Master or Isco)	d Lli	153 022 021 152 073 040 201	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Tem Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera	Watt ivity p Gmall Tools & Equipment s c (spec. Master or Isco)	d Cli	153 022 021 152 073 040 201	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible	d Cli	153 022 021 152 073 040 201 038 023	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter VOC Analyzer,	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible Photovac 2020 (PID)	d Cli	153 022 021 152 073 040 201 038 023 012	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Tem Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible Photovac 2020 (PID)	d Cli	153 022 021 152 073 040 201 038 023 012 028	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind Water Quality N	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible Photovac 2020 (PID)	d sli	153 022 021 152 073 040 201 038 023 012	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Equi Qty	Item Generator 3500 Meter, Conducti Meter, pH/Tem Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible Photovac 2020 (PID)	d Cli	153 022 021 152 073 040 201 038 023 012 028	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind Water Quality N	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible Photovac 2020 (PID)	d Clil	153 022 021 152 073 040 201 038 023 012 028	
Site Instru Checked By Robin McCon Expendable Items Used Qty Item Bailer, Disposable (s Drum, Closed Top 5 Filter, In Line Miscellaneous Healt Tubing, 14, NOS Tubing, 3/8" NOS	specify size) 55 Gallon th & Safety Items	Tempera	LEA Number 090 086 024 060 007 008	Qty	Item Generator 3500 Meter, Conducti Meter, pH/Temp Miscellaneous S Pump, Grundfos Pump, Peristalti Pump, Submers Pump, Watera Turbidimeter VOC Analyzer, Water Level Ind Water Quality N	Watt ivity p Small Tools & Equipment s c (spec. Master or Isco) ible Photovac 2020 (PID)		153 022 021 152 073 040 201 038 023 012 028	



DAILY FIELD REPORT

CALIBRATION RECORD

Loureiro Engineering	Associates, Inc.						CALIBRATIC	N RECORD
LEA Comm. No. Project Location Client	P&W East Hart	llowpond Quarte ford, East Hartf y Division - JTc	ford, CT				Page Dat	
pH Meter/Serial # Initial Calibration Calibration Check Calibration Check		Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Turbidity Meter/Seri Initial Calibration Calibration Check Calibration Check		J Time	0 NTU	20 NTU	100/NTU	800 NTU		
PID Meter/Serial # Initial Calibration Calibration Check Calibration Check		Time	Standard	Meter Reading	Zero with			
Balance/Serial # Initial Calibration Calibration Check Calibration Check		Time	Standard	Balance				
Comments								
Field Personnel	Heather Grimn Robert Zurkow						Signature	



FIELD SAMPLING RECORD

MISCELLANEOUS SAMPLES

LEA Comm. N			F2 8270 00	Take transport		Page	9/14/09
Project	UTC P&W V				Mon.	Date	9/14/04
Location Client	P&W East H Pratt & Whit						in (pun
Sample ID	Location ID	Time	Sample Type		PID/FID Reading	Comments	Waste Cont ID
1130949	BKT BKE PEsamples PEsamples	1300	The second in		_		_
1130950	BKE	1452	BKE	_	_	_	
1130894	PESamples	1410	PE.	_	_		
1130893	be samples	1410 1400	bE.		_		_
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		_/					
		_					
-							*
Field Personnel	H. GR	KOWS	n12:			Signature	y.:
	K. TU	LOW	SKI			/ Langues	()



DAILY FIELD REPORT

Supplemental Sheet

Loui ell o El igli leerii i	g Associates, inc.	Supplemental Sheet
LEA Comm. No.	88UT907.001	Page 2 Lof 10
Project	UTC P&W Willowpond Quarterly GW Mon.	Date 0 / 109
Location	P&W East Hartford, East Hartford, CT	Date 1 11 109
Client	Post & White an Division III.	
Client	Pratt & Whitney Division - JTot	· · · · · · · · · · · · · · · · · · ·
Description of Site		
830 Amve	albrotion setups onsile to collect samples disposal taking the bodt out	
Bagin	allbrotion Letuss	
1545 Manny	male to collect camples	
Mell Mell	Vicasia)	
TRO BOUTE	to land the hode out	
1945 MCPCIO	Talving The boat our	
1 July offinite		
		/
	/	
	1120	
	X	
	/	
		0 . 0 1
Field Personnel	Heather Grimm	Signature V
	Robert Zurkowski	Test for home



FIELD SAMPLING RECORD

PERFORMANCE SAMPLE

LEA Comm. No. Project Location Client	88UT907.001 UTC P&W Willowpond Quarterly GW Mon. P&W East Hartford, East Hartford, CT Pratt & Whitney Division - JTot	Page Of Date 9/11/09
LEA Sample ID	1130893-4005	WERA . USA 800-372-0122 EUROPE 44 (0) 161 946 2777 Loureiro Engineering
LEA Sample ID	1130893-metals	VOCs Preserved with HCI Sample ID # 0908-09-02.1
LEA Sample ID	1130893-PLBS	Loureiro Engineering Metals Preserved with HNO3 Sample ID # 0908-09-02.4
LEA Sample ID	1130894-8794	Loureiro Engineering PCBs Unpreserved Sample ID # 0908-09-02.3
LEA Sample ID		Loureiro Engineering CT ETPH
LEA Sample ID		Unpreserved Sample ID # 0908-09-02.2
ield Personnel	Healther Grand	Signature Ph



Project UTC P&W Willowpond Quarterly GW Mon. Location P&W East Hartford, East Hartford, CT Sa	Date 9 /// 109		
ocation D&W East Hartford East Hortford CT	1 10		
	imple Time 10:2		
Pratt & Whitney Division - JTot			
Monitoring Well Number WT-MW-195R Sample Number(s) 1130890 113089	900f		
Initial Field Data and Measurements Depth of Well 12.22 Reference Used TOR Depth to Water 9.90 PID/FID Reading			
Height of Column 2.32 Interface Yes / No If yes, Depth	Lighter / Heavier		
Well Casing Diameter 15" Material 100 General Condition Casing Secure Ground to Reference Comments Cover Locked Other (describe)	OK Bad		
Development Information			
Parameter Depth to Water Pump Setting Purge Rate (mL/min) Purged (L) Temp (C) Spec. Cond. (uS/cm) pH (SU) ORP (Eh) DO (mg/L) Turbidi (NTU)			
9:20 9.90 300 120 START PURGING 9:30 10:00 1.2 17:04 3377 6.42 29.9 0.50 23.7			
9:30 10.00 1.2 17.04 3371 6.42 29.9 0.50 23.7	5.2 5.7 5.3 8.5		
9:40 10:00 2.4 17.05 3361 6.43 30.0 0.55 12.6	5.7		
9:50	5.3		
10:00 4.8 17.03 3304 6.43 29.1 0.65 2.88	3 6.5		
10:10 6 17.04 3298 6.43 28.7 0.67 0.61	7.0		
10:15 1 1 6.6 17.06 3290 6.42 28.4 0.67 0.58	3 6.8		
10:20 7.2 17.06 3289 6.42 29.6 0.67 0.55	7.0		
10:20 7.2 17.06 3289 6.42 28.6 0.67 0.55	7.0		
$\mathcal{H}(2)$			
Developement Method Peristaltic Pump/ Bailer / Inertial Pump / Other			
Sample Field Treatment If any ambiguity could exist, be sure to indicate the field treatment applied to aliquot with the appropriate suffix in the sample ID on both the sample bottle the Chain of Custody!			
Field Decontamination? Yes (No) If Yes, with what? Waste Container ID 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
Additional Comments			
eld Personnel Heather Grimm Signature	2 /		
Robert Zurkowski	M'		



FIELD SAMPLING RECORD

*	OTT!	BAR	ATT.	MELLIA.	w	C 1	BETT	-
	I B MA	H.	4 1 1/4/	WEI		P V		- 84
	14 P W W		15 5 9 9	4 4 1 7 1	38.7	13.54		, B

LEA Comm. I Project Location Client	Į F	&W Eas	W Willow st Hartford	pond Quar I, East Har vision - JT	tford, CT			11:		Page Date Samp	
Monitoring '	Well Nu	mber \	NT-MW	-50	Samp	le Numb	er(s)1130	1895, 113	30895	1f, 1130	896, 1130896
Initial Field II Depth of Wel Depth to Wat Height of Col Well Casing I Protector Ground to Re Comments	er lumn Diameter Road	1.00 1.00 Box/St		Reference PID/FID I Interface Materia	Used	TOC Yes/N		es, Depth General Casing Collar Cover		Lig	DOC
Development	Informa	ation							1	*	
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
Time 9:16 9:35 9:55 0:46 9:55 10:05 10:25 10:28	1.80 *	350	100	1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0 1.0	15.76 15.67 15.67 15.67 15.87 15.87		PURGIN 16.77 16.77 16.77 16.70 16.169 16.169	-183.3 -193.7 -196.9 -196.3 -191.3	1.33 0.29 0.16 0.16 0.21 0.25 0.31	15:7- 11:11 12:11 17:21 12:05 25:78 29:08	
			1	/D 11 /						SKINIL	rs
Pield Deconta Waste Contain Additional Co	Treatme mination ner ID	nt If any alique the C	ambiguit ot with the hain of Ci	approprie stody!	ist, be sur ate suffix with wha	re to indi in the sa t?	cate the f mple ID	on both th	e sampl	e bottle lab	
Field Personnel	1	leather Cobert Zu	rimm rkowski						Sign	atific J	nu



FIELD SAMPLING RECORD

LOW FLOW WELL SAMPLE

LEA Comm. Project Location Client	U P	&W Eas	W Willow at Hartford	pond Quar I, East Har ivision - JT	tford, CT				2	Dat	e 7 of 0 te 9/11/09 ple Time 12:40
Monitoring	VALUE SUPPLIES	10 49				le Numbe	er(s) 1130	891		11308910	,f
Initial Field I Depth of Web Depth to Wat	ll <u>17.</u> ter <u>11.</u>	67		Reference PID/FID I	Used Reading	TOR Ves/No	a) If ve	s Denth		Li	ghter / Heavier
Well Casing Protector Ground to R Comments	Diameter Road	1.5 Box/ St	// ickup	Materia	ıl PV			General Casing Collar Cover	Condition Secure Intact Locked (describe	on Ok	
Development		tion									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:20	11.67 12.02 12.02	300	120	55ARI 1.2 2.4 3.6 4.8 7.2 7.8 8.4 9.6	PURG 18.17 18.19 18.32 18.51 18.44 18.43 18.43 18.43	3827 3819 3712 3629 3629 3629 3420 3420 3419	6.64 6.65 6.63 6.63 6.63 6.63	13.3		38.2 19.6 14.7 10.57	4.6 4.5 2.4 2.6 2.1 1.8 1.5 1.8 2.0 1.9
Developement Sample Field Field Decontate Waste Contain Additional Contains	Treatment amination ner ID	nt If any alique the C	ambigui	ty could ex e approprioustody!	ist, be sui	re to indi	cate the f				ch sample bel and on
Field Personne	_	eather G	rimm irkowski						Sign	nature TM	, ,



Project UTC P&W Willowpond Quarterly GW Mon. Location P&W East Hartford, East Hartford, CT Sample Time 3:2
Location P&W Fast Hartford Fast Hartford CT Sample Time 12:17
Client Pratt & Whitney Division - JTot
Monitoring Well Number WJ-HW-40 Sample Number(s) 1130 \$97, 1130 897 uf
Initial Field Data and Measurements
Depth of Well Reference Used TOC
Depth to Water 11,90 PID/FID Reading
Height of Column 5 . 8 L Interface Yes No If yes, Depth Lighter / Heavier
Well Casing Diameter 1/2" Material DVC General Condition OK/ Bad
Protector Road Box / Stickup Casing Secure
Ground to Reference Collar Intact
Comments Cover Locked Cover Locked
Other (describe)
Development Information
Parameter Depth to Pump Purge Rate Cum. Liters Temp (C) Cond. C pH (SU) ORP (Eh) DO Turbidity Comment
Time Water Setting (mL/min) Purged (L) Cond. (uS/cm) (uS/cm) (mg/L) (MTU)
12:40 350 50 0.0 MART PURGING
13:00 * 1 3.0 17.84 19839 4.70 1279 0.28 9.16
1310 * H.O. F. MAHBUHU, H-29,10.343.
1315 25 1/1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1/2 1
1010 x 5.0 17.01 48+1 (1:+1 -129.40, 400.3+
CALIDICA
Developement Method Peristaltic Pump / Bailer / Inertial Pump / Other
Sample Field Treatment If any ambiguity could exist, be sure to indicate the field treatment applied to each sample aliquot with the appropriate suffix in the sample ID on both the sample bottle label and on
the Chain of Custody!
Field Decontamination? Yes No If Yes, with what?
Waste Container ID 718747
Additional Comments * Not weather due to 1/2" diameter
Field Personnel Heather Grimm Signature
Robert Zurkowski / / / / / / / / / / / / / / / / / / /



FIELD SAMPLING RECORD

LOW FLOW WELL SAMPLE

oureiro Engir	neering As	ssociate	s, Inc.					LO	W FLC		LL SAMPL
LEA Comm.	No. 8	8UT907	.001							Page	e of of
roject	Ţ	JTC P&	W Willow	pond Quar	terly GW	Mon.				Dat	te 9/11/04
Location	P	&W Eas	st Hartford	d, East Hart	ford, CT					Samp	ole Time 14 :
Client	P	ratt & V	Whitney D	ivision - JT	ot						
Monitoring	g Well Nu	mber 4	IT-MW-	58	Samp	le Numb	er(s) 1130	892		130892	2 of
Initial Field	Data and	Measur	rements								
Depth of We	ell /7	.95		Reference	Used	101	7				
Depth to Wa	ater 11.	.12		PID/FID F	Reading	· •	1				
Depth to Wa Height of Co	olumn_6.8	83		Interface		Yes/10	If ye	s, Depth		Li	ghter / Heavie
Well Casing	Diameter	15	//	Materia	1 PV	C		General	Conditio	on OK	Bad
Protector	Road	Box/St	ickup						g Secure	1 5 7	
Ground to F									Intact	X	
Comments								Cover	Locked	-	X
BOLTS R	USTED	IN 1	PLACE	COUL	R BRO	OKEN		Other	(describe	()	
Developmen					,						
Paramete		Pump	Durge Date	Cum. Liters		Spec.		Kestari Albertan	DO	Turbidity	10%
Time	Water	Setting	(mL/min)		Temp (C)	Cond. (uS/cm)	pH (SU)	ORP (Eh)	(mg/L)	(NTU)	Comment
13:30	17.95	300	130	START	PURGI						-3
13:40	18.19		170	1.2	17.06	1589	6.18	16.2	0.65	7.99	6.7
13:50	18.19			2,9	17.03	1584	6.18	10.2	0.38	7.56	3.9
14:00	1			3.6	17.00	1575	6.16	13.1	0.22	7.24	2.3
14:10				4.8	16.96	1558	6.14	9.3	0.21	5.28	2.2
14,20				6	16.82	1540	6.13	\$7.8	0.20	5.28 4.33 2.68	2.1
14:30				7.2	16 07		6.13	7.5	0.20	168	2.1
14:35				7.8	16.82	1936	6.13	1.1	0.21	2.14	2.0
14:40	V	1	1	8.4	16.82	1535	6.13	7.8	0.26	1.98	2.1
11,10	-				10.02	7,550		,,,			
					1					-	
					0%)					
					6						
/											
/				/ D 11 /		10					
Developeme							1000				
Sample Field	d Treatme										
			ot with the hain of C	e approprie	ite suffix	in the sa	mple ID (on both th	ne sample	e bottle lai	bel ana on
Sald Dage	lamile at			and the second	withb -	+O					
Field Decont Waste Conta	Name of the State	11/ 10	es / 100 8342	II Yes,	with wha						
			00 11								
dditional C	omments	8									
eld Personne	el H	leather C	rimm						Sign	ature -	1
- L VIOVIIII			rkowski						2/	ature 3	14.



16+3

CHAIN OF USTODY 495 TECHNOLOGY CENTER WEST • BUILDING ONE

95 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753 ACCUTEST JOB #:

ACCUTEST QUOTE #:	
C152120091-450	

	CLIENT INFORMATION		FAC	ILITY INFO	RMAT	ION	100					ANAL	YTICAL	. INFOF	RMATION	9199910	MATRIX CODES
ADDRESS CITY SEND REPORT TO: PHONE #	MICHARLY	ZIP PROJECT	1907 NO.		£a			A fo	_	JA A BOB	58083	ETUH MERKHEMETAL				•	DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTI	ON .	LLECTION	SAMPLED	MATRIX	u " =	-	RERVA	STREET, SQUARE, SQUARE,	10	K	19	7/4			4	SOLID
SAMPLE #	TIELD ID TOWN OF GOLLEGIS	DATE	TIME	BY:	¥	# BO	Z Z	HISO4	ğ W		- Table	0	1				LAB USE ONLY
,	1130891.	111109	1240	V7	WE	2	X	T	\times	X					TT		
	113(189)	11111	WEI	V7-	1	4			\searrow		X	X					
,	1130891UF		12110	27		1	11	X	X	-		X	1			+	
,	120890		IM	V7		7	1		1	~	/		\top		11		
,	1120890		100	VI	\neg	2						V	\top			+	
	1130890UF		1005	12		1	+										are no the
	1120 894		1321	11/6	\top	2	\top	1		X					1	1	1 30
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,	1130895		1029	115		2			$\hat{\lambda}$	X		-					
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			-	1710		-			P.							11000	
/	ATA TURNAROUND INFORMATION			LIVERABLI	EINFO	ORMA	ION	1990	+ 4-5	12	-	-			ENTS/REA		Profit Services
☐ 7 DAYS /☐ 48 HOUR☐ OTHER 14 DAY TURNAR	STANDARD APPROVED BY: RUSH EMERGENCY ROUND HARDCOPY, EMERGENCY OR RUPPREVIOUSLY APPROVED	COMM	DARD IERCIAL "I DELIVERA FORMS R (SPECIE	BLE						1	000		TK	CP CI	nalyti 100% d	e CT	RCP
W-11-		MUST BE DOCUMENT	ED BELOW				S CHA	NGE				CLUDIN	G COU	RIER DE	ELIVERY		
1 LAND		1. Balled		RELIN 2.	QUISHE	D BY:			DA	ATE TI	ME:		RECEIVE 2.	D BY:			(4)
RELINQUISHED BY		RECEIVED BY:	_	RELIN	QUISHE	D BY:			DA	ATE TI			RECEIVE	D BY:			
3. RELINQUISHED B	Y: DATE TIME:	3. RECEIVED BY: 5.		4.		-					RESER	VE WHER		CABLE		ON ICE	TEMPERATURE C
		(T					-	-									



MARLBOROUGH, MA 01752

TEL: 508-481-6200 . FAX: 508-481-7753

A	CCU	TEST	OL	B (

ACCUTEST QUOTE #:

Laboratories **CLIENT INFORMATION FACILITY INFORMATION** ANALYTICAL INFORMATION MATRIX CODES DW - DRINKING WATER PROJECT NAME GW - GROUND WATER ADDRESS WW - WASTE LOCATION 06062 WATER SO - SOIL CITY, STATE PROJECT NO. SL - SLUDGE OI - OIL LIQ - OTHER SEND REPORT TO: LIQUID PHONE # FAX# SOL - OTHER SOLID COLLECTION PRESERVATION MATRIX ACCUTEST SAMPLED FIELD ID / POINT OF COLLECTION SAMPLE # DATE TIME LAB USE ONLY DATA TURNAROUND INFORMATION DATA DELIVERABLE INFORMATION COMMENTS/REMARKS CT RCP analytical 14 DAYS STANDARD APPROVED BY: STANDARD COMMERCIAL "B" 7 DAYS RUSH **48 HOUR EMERGENCY** □ DISK DELIVERABLE OTHER ☐ STATE FORMS □ OTHER (SPECIFY) 14 DAY TURNAROUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY RELINGUISHED BY SAMPLER: DATE TIME: 16:20 RECEIVED BY: RELINQUISHED BY: DATE TIME: RECEIVED BY: 1. HOND /FI RELINQUISHED BY: DATE TIME: RECEIVED BY: RELINQUISHED BY: DATE TIME: RECEIVED BY: 3. 4. 4. DATE TIME: RECEIVED BY: RELINQUISHED BY: SEAL # PRESERVE WHERE APPLICABLE ON ICE **TEMPERATURE**

ACCUTEST. Laboratories

1,62.

CHAIN OF TUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JO	B#:	

ACCUTEST QUOTE #: 13212009 - 463

	CLIENT INFOR	RMATION		40.1962 1000		FAC	ILITY INFO	ORMA	TION	650				Wile?		ANAL	YTICA	L INF	ORMA	TION	879 SONA 1: 172	MAT	RIX CODES
ADDRESS CITY, W.N	10 Engineerin Nawest Dri Ville (McKinner *860-410-	TATE		PROJECT PROJECT FAX #	ON CT N	100 miles 100 mi	BOKIPA Ney.	Carl			fov		50	4400B	S 8007	Orbid PWP ICITY	(1, M, th					SO SL OI - LIQ	- DRINKING WATER - GROUND WATER - WASTE WATER - SOIL - SLUDGE OIL - OTHER LIQUID - OTHER
ACCUTEST	EIE D D / DO				COL	LECTION	CAMPI ED	MATRIX	OF TLES	PR	ESER	VATIO	N S	200	5	-	Z Z						SOLID
SAMPLE #	FIELD ID / PO	INT OF COLLECT	ION	DATE		TIME	SAMPLED BY:	MA	BOT	무	H	NON -	<u>y</u> -	2	Salar I	4	2					LAE	USE ONLY
	1130895	uf		9111	109	1029	,16	6W			K					\rightarrow						well	4
,	1130896			9111	04	1029	HB	1	2	X				1									1,000
	1130 89	Y		9111	109	1029	146	1	4								,						
,	113080	llouf		9/11	(4)	1029	146	4	l		X					X	1						1
	,,,			11	1											ľ							
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	7年	i i									11		П										
	DATA TURNAROUNI	INFORMATION	1 2 2 2 3			DATA DEI	IVERARI	E INE	ORM	ATIO	<u> </u>	77.83.3	+	200	Silver Silver	20.001		COM	MENT	S/REM	ARKS	Till Car	O HESTORIES TO
	STANDARD	APPROVED BY		y STA			TVETTABL		0111117	1110				0,0	h /.	16	CT 1		_		ical	lich	Carl
7 DAYS				□ co	MME	RCIAL "E							-	1,11	M	TE.	or o	cc d	UN	ulyi	e CT	11711	- TUL
OTHER				□ ST/	ATE	FORMS							-				WC.	77 ,	, VI	Julia	2 (1	KLP	
	AROUND HARDCOPY.		SH IS FAX	□ от	HER	(SPECIF	Y)			_		_			e po	VY.							
A. A	S	SAMPLE CUSTODY	MUST BE	DOCUME	NTE	D BELOW	EACH TI	ME SA	MPL	ES C	HANG	E POS	SSES	ION,	INCL	UDIN	G COL	JRIER	DELIV	ERY		يو الد	
RELINGUISHED		PATETIME: 16:20		Y: //	4			NQUISH					-	E TIME			RECEIV						
RELINQUISHED	BY:	DATE TIME:	RECEIVED	Y:	01-		RELI	NQUISH	ED BY:				DAT	E TIME	li .		RECEIV	ED BY:					
3.	BY:	DATE TIME:	3.	IY:			4.			_				DOS	eepv	WHE	4. E ADDI	CABLE			ON ICE		TEMPERATURE
5.	***	Arra de Hillian	5.				SEAL							PHE	SERVI	WHEF		CABLE					C



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

LEA Comm. No. Project	88UT907.00		Quarterly GV	V Mo				Page _	1 of 17
Location			Hartford, C7		n1.			Date	210104
Client	Pratt & Whit								
Arrived at Site	8:00	Departed f		6:3	O Vehi	ala	ST-	GW	Vary
Site Activities	8.00			600	Odom	eter (Start)F	le	turn	Vau
Soil Sampling Groundwater Sa	and in a	Geoprob				roject Info		11.37	200
	3	Concrete				aple Number		1136	028
Surface Water S		Construc			355	0 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 - 1 -	Y CO SHIPPORT		
Vapor/Air Samp		waste M	anagement				not complete)	· ·	d .
Concrete Sampli	ng	H			Sampling	ries used		See	Chan
Other Sampling		Inspectio						Accent	C5 F
Other Sampling		Site Wall					nent left at/in	7/10	4
		Surveyin			Site Con			Jett	thompson
Well Developme	ent	Other (D	escribe)		Contract	ors on Site		-	
Non-productive Time						• To • Company to the		/	
None		Weather			Time and	d place to m	eet contractors		/
Equipment Brea	kdown		Equipment						1
Late		Other (D	escribe)						
Quality Assurance Ch	ecks				Residuals Dispo			224 11 2	
Yes N/A No					Item	Approx. A	mount	Contain	er ID
the state of the s	iple labels complete				Soil/Solid		0		
	ple/cooler seals Of	(Groundwater		22gal	728.	342
	samples obtained				Decon Fluid				
Cha	ins of custody				PPE		9		
All	forms/logs complet	e			Other				
Site	condition OK	Weather	Conditions						
Site	H&S Plan on site	Tempera	ature 40's	-	Precipitation		Wind	light	1
Inst	ruments calibrated	Comme	nts					0	
Checked By Robin McKen	7								
Expendable Items Use	i		111000000000000000000000000000000000000	-	ipment Used				
Qty Item			LEA Number	Qty	Item				LEA Number
Bailer, Disposable	The state of the s		090		Generator 3500				153
Drum, Closed Top	55 Gallon		086	-	Meter, Conducti				022
Filter, In Line Miscellaneous Hea	Ith & Cafatu Itama		060		Meter, pH/Temp Miscellaneous S		& Equipment		021 152
Miscellaneous Hea Tubing, 1/2", NOS			007	+	Pump, Grundfos		& Equipment		073
X Tubing, 3/8", NOS			008	4	Pump, Peristalti		ter or Isco)		040
Water, Distilled	14		025	1	Pump, Submersi				201
•					Pump, Watera				038
				4	Turbidimeter				023
				1	VOC Analyzer,)20 (PID)		012
				4	Water Level Ind	D. C. C. C.			028
				4	Water Quality N	leter w/Flov	v Cell		070
2115				0:			~		
Field Personnel	Nate Emmon	S	Alex	Clar	ke		Signatur Los: En	e .	
	C. Scott Broy			***	mico				



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

Supplemental Sheet

LEA Comm. No.	88UT907.001		Page 2 of 17
Project	UTC P&W Willowpon	d Quarterly GW Mon.	Date 12/8 109
Location	P&W East Hartford, Ea		ū
Client	Pratt & Whitney Divisi	on - JTot	
Description of Sit	te Activities		
On Site	8:00		, , ,
	S. Brown + A	· Clarke onsite Getti	ng equipment Ready
	Calibration, Get	ting Prat Security to U	xlock gotes ect
	V. Emmons Comple	eted prejon with M	GIR HOPE.
	N. Emus Beam	ted and Started Movin	of the lawer sound have
	Been Drained to	water levels upper Po	els.
	10.65 R. D. Anice	on gite (Car Problems	Began Sampling
	11:00 K. Emmons	Began Sampling	
	15:30 S. Brown -	- N. Emmons Completed 5	Compline and Began
- /	16:00 A Clarke	Planning for Next day + R. D'Amico Completed meets Benny from Ac	To Mi
//	6:15 SI Brown	ments Report from Dr	culest for Sample
/(Ter. A VO		
	N. Fuzziono	takes waste to was	ste treat
-16	:30 aff 5,44	2	*
/	10		
			-
		46)	
		CX	
			71-21-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-
Field Personnel	Nate Emmons	Alex Clarke	Signature
.ora i oracilitor	C. Scott Brown	Rich D'Amico	Signature NN -www



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

LEA Comm. Project Location Client	No. 88UT907.001 UTC P&W W P&W East Ha Pratt & Whiti	/illowpo artford, I	East Hartf	ord, CT	Mon.	Pa I	age 3 of 17 Date 1.2/8/09
Sample ID	Location ID	Time	Sample Type		PID/FID Reading	Comments	Waste Cont. ID
1136026	Trip Blank	10:00	BKT			Trip Blank	
1136027	Trip Blank Equipment Blank	15:50	BKE	/		Trip Blank Equipment Blank	
						(*)	
				\wedge			
			(1			
							11
Field Personne	Nate Emmons C. Scott Brow			Alex C	Clarke O'Amico	Signature Nova Gr	ment



DAILY FIELD REPORT CALIBRATION RECORD

LEA Comm. No. Project Location Client	88UT907.001 UTC P&W Willo P&W East Hartfo Pratt & Whitney	ord, East Hartfor						Page 4 of 17 Date 12/8/09
pH Meter/Serial #	01m0524		4.0	7.0	10.0	1000	108	
		Time	pH 4.01	pH 7.00	pH 10.01	Spec. Cond.	ORP	DO
Initial Calibration	0261124 AF	8:15	4.0	7.0	10.0	1000	109	
Calibration Check	- 1 11	815	4.0	7.6	10.0	1000	109	
Calibration Check	_	8:15	4.0	7.0	10.0	1000	109	
Turbidity Meter/Seri	al# LEA#5	.3522	-		_	***************************************		187
		Time	0 NTU	20 NTU	100 NTU	800 NTU		
Initial Calibration	3521 _	9:00						
Calibration Check	3520	9:00	/	/	/	/		
Calibration Check	3519	10:45		/	_/_	/		
PID Meter/Serial #								
Initial Calibration		Time	Standard	Meter Reading	Zero with			
Calibration Check	_							
Calibration Check	_							
Balance/Serial #								
Initial Calibration		Time	Standard	Balance				
Calibration Check	-			-				
Calibration Check				-				
Canoration Check				(and all the second sec			[4]	
Comments								
Field Personnel	Nate Emmons		Alex Clarke				Sjghglu	re I
	C. Scott Brown		Rich D'Amico				Pathu +	www.A



FIELD SAMPLING RECORD MONITORING WELL INVENTORY

	C. Scott Brow				'Amico			Marte	mous
ield Personnel	Nate Emmon			Alex C	Naule -			Cial	
233813									
2233812	-								entre 1
2233811	WT-MW-43	9:00			11.90	8.81			10.0
233810	WT-MW-41	9:40			9.47	5.03			
233809	wT-mw-42	9:30			8.75	3,50			
233808	WT-MW-40	10:00			17174	12.99			-
2233807	WT-MW-44	9:30			13,59	10.51			
2233806	WT-10W-195R	9:00			11.78	11.45			
2233805	wt-mw-39	10:40			17.86	13,15			
2233804	WT-MW-58	10:30			17.17	14.39			
2233803	WT-MW-50	10:15			5.22				
2233802	STAR Guage				Dog				Pond has been Drain
2233801	WT-MW- 45	9:55			13.66	10.42			
2233800	WT-MW- 48	1			7.55	4.68			7
2233799	WT-MW-57	9:35				11.83			Needs Draining
2233798	WT-MW-47				14.35				Neids Dealinger
233797	WT-MW-46		and the same of th		12.65	5.59			
2233796	WT-MW-49	9:00	of Well t	o water		3.64		Elevation	100 000 000 000 000 000 000 000 000 000
Sample ID	Location ID	Time	Predicted	d Depth		Depth	PID/FID	Reference	Comments
Client -	Pratt & Whit								lift.
ocation	P&W East H	artford, I	East Hartfo	ord, CT					
roject ocation	UTC P&W V								Date 12/8/09



Monitoring We	ll Number		ivision - JT	tford, CT ot						e/ 3 /8/09 ole Time <u>/3</u> :
		WT-MW	- 49	Sampl	e Numbe	er(s)1136	015		136015	UF.
Depth of Well Depth to Water Height of Column Well Casing Dian Protector Ground to Refer Comments	n	.50 B.64 (Stickup)	Reference PID/FID I Interface Materia	Used Reading	Yes (No	of R	General Casing Collar Cover	Conditions Secure Intact Locked (describe	on OK	
Development Inf	ormation									
Parameter Dep	pth to Pur fater Sett	mp Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:15 3.	64 300	0 156								Purging
11:35 3.		150	3_	9.83	427	6.63	37.7	72.3	8.14	9)
the second second second	20	150	4.5	9.80	427	6.58	35.8	66.5	7.46	
11:55 4.	CONTRACTOR OF THE PARTY OF THE	100	6	10.01	426	6.46	20,1	62.4	6.32	
12:05 4.6		100	7.0	10.54	429	6.30	7.5	40.4	5.57	
the second of the second of the second	70	100	9.5	10.96	435			\$9,4	4.74	
12:25 4.7		150		10.60	443	6.25	-37,9	39.4	3.01	
12:35 4.		150	11	10.66	446	6.25	-40.3	59.4	2.91	
	70	150	13.5	10.63	447	6.25	-42.5 -43.3	59.5°	2.74	
12:50 4.	70	150	14.00	10.61	441	6.25	-43.4	59.4	1.87	
	.70 30		14-75	10.63	447	6.24	-43	59.4	1.85	
Simple -	10 50	0 150	11-12	70.6.5		6.21	1.5.1	37. (1.45	
sing q				~						
			-	16						
			(/		_					
		_								
Developement M	lathad Da	riotaltia Dum	n / Pailar /	Inartial D	umn / Ot	har				_
Sample Field Tre	eatment If	any ambigui liquot with th	ty could ex e approprie	ist, be sur	e to indi	cate the f				
		e Chain of C		72127 1981		- 1				
Field Decontamir Waste Container		Yes No 128342	If Yes,	with what	? Me	th on	WLI			
Additional Comm	nents									
ield Personnel		Emmons off Brown			Clarke D'Amico			Sign	ature	



LEA Comm.		88UT907								Page	
Project				pond Quar							te 12/8/08
Location				i, East Har						Samp	ole Time 150
Client	F	Pratt & V	hitney Di	vision - JT	ot						
Monitoring	Well Nu	mber _	Wm-76	- 48	Samp	le Numb	er(s) 1136	5016		136016	,
Initial Field I						4	00				
Depth of We		7.55		Reference			af 1				
Depth to Wat				PID/FID F	Reading	Yes /N	, IC	- D4			-L/II
Height of Co.	lumn		11	Interface			o II ye	s, Depth		LI	ghter / Heavier
Well Casing	Diameter	6	2"	Materia	1 _ 1	UC			Condition	on OK	Bad
Protector	Read	1800 KS1	ickup	,,					g Secure		
Ground to R	eference		18						Intact		
Comments									Locked	/	
								Other	(describe	2)	
Development		ation			,						
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
13:40	4.68	300	150	_						-	Purging
14:00	4.98	1	150		9,25	625	6.72	-149,0	57.4	16.1	3.)
14:10	5.2i		150		8.93	646	6.75	-156.1	56.3	11.5	
14:20	5.60		150		9.19	674	6.81	-162.6	58.4	8.06	
14:30	5.63		100		9.14	687		-163.4	59.4	4.88	
14:40	5.63		100		9.15	690	6.87	-1620	59.4	2.19	
14.45	5.63	1	150		9.12	693	6.81	-162.1	59.4	2.11	
15:00	5.63		150		9.11	693		-162.0	59.4	2.05	
15:05	5.63	300	150		9.11	694	6.87	1620	59.4	1.91	
Sample -											
						_				-	
						ala					
					(10					
		1	L. F	VD "						l	
Developemen	-	_									
Sample Field	Treatme	aliqu		appropria							ch sample pel and on
Field Deconta Waste Contain			D/ No 8342		vith what	? M	eth o	n WI	I		
Additional Co	mments										
ield Personnel		ate Emm				Clarke D'Amico			Sign	atrire/	



LEA Comm		88UT907									of V
Project		JTC P&		12/0/0							
Location				d, East Har						Samp	le Time
Client	I	Pratt & V	Vhitney D	ivision - JT	'ot				-/		
Monitorin	g Well Nu	mber 🗸	UT-MU	v-1952	Samp	le Numbe	er(s) 1136	5010	P		-/
Initial Field Depth of W Depth to W Height of C	ell (t	.78		Reference PID/FID F Interface	Used Reading	topo o	Por D If ye	s, Depth		Lig	chter / Heavie
Protector Ground to Comments	Road	Box /St	ickup		e 45		۵	Casing Collar	Condition Secure Intact Locked	on OK	Bad
be Cil	leo.	relle	not so	wheel	de			Other	(describe	()	
Developmer											
Paramet		Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
0915	11.45	300	100	0 <	5	- sha	a h	regin	-		>
							. ,	2.	7		
						_					
	-		-			/ -					
	-	-			/	+1-	-				
-	-				-	+					
	+	-			-	11/					
	+					V					
	1	-				N					
	1				X	1					
	1			,	1	1	1				
				/	1						
Developeme	ent Method	Perist	altic Pum	Bailer /	Inertial P	ump / Ot	her _				
Sample Fiel	d Treatme	aliqu		e approprio							
Field Decon Waste Conta	ainer ID	728	342		with what				-	$\overline{}$	
Additional (Comments	لمان ا	de te	surcuil	vu o	r san	whe.	کسو	to ou	dux 8	3-60-1
ield Personn	iel N	late Emn	nons		Alex	Clarke			Sign	agure /	10
	C	Scott B	trown		Rich	D'Amico				/ X	+ 8



FIELD SAMPLING RECORD

LOW FLOW WELL SAMPLE

LEA Comm.	No.	88UT907	.001							Page	e 7 of 1
Project	1	UTC P&	W Willow	pond Quar	terly GW	Mon.				Dat	te 12/8/09
Location	8	P&W Eas	Samp	ple Time 11 2							
Client]	Pratt & V	hitney D	ivision 7 JT	ot						
WT-M Monitoring	Well Nu	ımber \	UT-MW	1914	Samp	le Numb	er(s) 1136	6011		136011	J€
Initial Field I Depth of We Depth to Wat Height of Co.	Data and ll(ter -	Measu 3.59	rements	Reference PID/FID I	Used Reading	Yes/N	o If ye	s, Depth		Li	ghter / Heavier
Well Casing									Condition		
Protector	Road	Box / St	ickup		1			Casing	g Secure		
Ground to R	eference							Collar	Intact		
Comments	one	bordie	tlod n	- hole in	v cerr	ev			Locked (describe	.)	_
Development	-	ation									
Parameter	Depth to Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment Do %
0940	10.51	300	100	0 -	5		Star	Sural	inci		~~
0950		1	1	1	13.37	439		38.3	c 8(3)	6.36	76:5
100		M			1408			35.5	5.37	1.51	51.8
1020		V/V		/	14.09	432	637	37.1	5.33 5.37	1.43	51.9
1030		AY		V	14.05	432	6.37	45,0	5.37	1.27	52.4
1040				Λ	M44	445	6.37	48.1	5.54	1.32	53.W
1045		19	/	V	14.61	459	6.360	594	5.47	689	53.6 53.8
1050		19		7		459	6.35	59.7	545	1.12	53.5
1055			1	7.5	14.6	459	6.36	59.8.	5.44	.97	53.6
1100	· or	10/	W.	8	14.57	460	6.35 6.36 6.36	59.8	5.44	1.41	53.5
						\wedge					
	15					/ i\	\				
-							1				
						1	1				
						V	/				
-	-		-			1					
					-		1				
Developemen	nt Metho	Perist	altic Pum	Bailer /	Inertial P	ump / Ot	ther		1		
Sample Field		ent <i>If an</i> aliqu	ambiguit	ty could ex e appropri	ist, be sur	e to indi	cate the f				
Field Deconta Waste Contai		n? Y	es/No 342	- 11-	with wha	t?			-/	\mathcal{A}	$\overline{}$
Additional Co	omment	s							1	1	
ield Personne	el N	Nate Emr	nons		Alex	Clarke			Sign	ature)	10
	(C. Scott E	Brown		Rich	D'Amice	-D.C.	O. Ain	. 163	11	18



LEA Comm. Project Location Client	ation P&W East Hartford, East Hartford, CT										
Monitoring	Well Nu	mber _	UT-MI	N-40	Samp	le Numbe	er(s)1136	6012	13	36012	A.
Initial Field I Depth of We Depth to Wa Height of Co Well Casing Protector Ground to R Comments	Data and	1 Measur 2.99 4.75	rements	Reference PID/FID I Interface Materia	il pic	_	_	General Casing Collar	Condition Secure Intact	on Ok	
+								Other	(describe	2)	
Development		ation				1 .					
Parameter	Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)		ORP (Eh)	(mg/L)	Turbidity (NTU)	Comment
1510	12.99	300	110	0	<	200-	stand	Dure	vcy -	2.1	->
1550	-1-	M	1			3790				1.52	12.4
1230	1	M	\vdash			3989				1.02	3.9
1240		1		-	14.88	3996	7.04	-155.0	1.56	.56	3.2
1250	-1	1/1			14.99	4013 3997 3996	7.04	158.9	. 24	.39	2.5
1255		N		/ V	14.73	3997	7.04	-154.4	.23	.41	2.3 2.3 2.4
1300			1/	5.5	14.72	3996	7.04	159.6	.23	.24	2.3
1305		1	X	6.1	14,73	3946	7.04	-159.9	065	.31	2.4
1310	+	10	10	6.6	14.72	3996	7.04	-159.7	.23	.31	2.3
					-		//	1			
					-		-/1			-	
							-1	1			
					-			1			
					-						-
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							1	/			
							7				-
Developemen	t Matto	Dariete	altic Pumi	Bailer /	Inertial E	umn / Ot	her	_			
									- N	de rans	
Sample Field	Treatme										
			ot with the hain of Ci	e approprio ustody!	ate suffix	in the sar	nple ID o	on both th	ie sample	e bottle la	bel and on
Field Deconta Waste Contai		7283	s/No	If Yes,	with wha	t?			/	\bigcirc	
Additional Co	omments										
ield Personne	I N	late Emm	nons		Alex	Clarke			Sign	ature)	10/
	-	. Scott B				D'Amico				V) \ \ \ \ \



LEA Comm. N		8UT907								Page			
roject				pond Quar						Dat	Date 12/8/0		
ocation				i, East Har				0		Samp	Sample Time 15:		
lient	P	ratt & V	hitney D	ivision - JT	'ot		ii-	/11					
Monitoring '	Well Nu	mber 🔽	JT-YW-	57_	Samp	le Numb	er(s) 1136	1024	13600	0 1136	aouf		
nitial Field D Depth of Wel			rements	Reference	Used	<u>ل</u> م ما) ~						
Depth to Wate				Reference PID/FID I	Reading	1900	Sport	1801	-				
Height of Col				Interface	ceaumg	Yes N) If ye	s, Depth		Li	ghter / Heavi		
Well Casing I	Diameter		-''	Materia	1 Cr			General	Conditi	on Ok	C Bad		
Protector	Road	Box A St	ickun		Arc				Secure		-		
Ground to Re			ickup						Intact				
Comments	cicionec			-					Locked		~		
Comments	-												
								Other	(describe	e)			
evelopment		ition							ı				
Parameter	Depth to	Pump	Purge Rate	Cum. Liters	Tame (C)	Spec.	w11 (010	ODD CEL	DO	Turbidity	Camerina		
Time	Water	Setting	(mL/min)		Temp (C)	Cond. (uS/cm)	pH (SU)	ORP (Eh)	(mg/L)	(NTU)	Comment Dogo		
	11.74	300	110	0		- Star	LOVA	zurcy	22 Jane 1		W 16		
1415	12.21	1	1		13.83	100	646		Z.0%	245	17.7		
CO.	1224		A	1			6.35		.70	216	69		
			\mathbb{N}	X					.52	125	5.2		
1435	12.25	-	1	/		252		-67.4					
1445	12.20		l V	/			6.34		.39	52.3	4.0		
1455	12.19		$-\Lambda$	W	15.49			-67.7	.31	18.2	3.2		
	12.20	-	- W		15.44			-67.7	.39	6.41	4.0		
	12.20		1	7.2	15.48	2505	6.31	-67.9		4.36	3.8		
1515	17.20	V	A.	7.7	15.37	2510	6.30	-67.9	. 39	4.89	3.9		
		- Vanan - 1				X	-			19			
		OWER THE RESERVE				- $$		/					
						-/				-			
Developement	t Method	Perist	altic Pump	Bailer /	Inertial P	ump / Ot	her _						
Sample Field	Treatmen	nt If am	ambiguit	y could exi	ist, be sur	e to indi	cate the f	ield treati	ment apr	olied to each	ch sample		
*		aliqu		approprio									
iold December	minetie-				niela colo c	0				^			
ield Decontai Vaste Contain			25/No 342	II Yes, V	with what						/		
dditional Co	mments									/ /	1		
eld Personnel	N	ate Emn	ions		Alex	Clarke			Sign	uture			



LEA Comm. N Project Location Client	U P	&W Eas	W Willow t Hartford	pond Quar d, East Hart ivision - JT	ford, CT					Date	12 of 17 e/2/9 16 9 le Time 47. 2
Monitoring V	Well Nur	nber '	NT-N	W-45	Samp	le Numb	er(s) 1136	014		113861	14.4
Initial Field D Depth of Well Depth to Wate Height of Colu Well Casing D Protector Ground to Re Comments	or /oumn G	9.47 76' Bex/St	25"	Reference PID/FID F Interface Materia	Reading)	General Casing Collar Cover	Condition Secure	on OK	ghter / Heavier Bad
Development l	Informa	tion									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
Annabase and the second second second	13.66	300	700		17.49 12.41 17.21 12.05 17.04 11.99 17.01 17.00	881 875 873 870 871	6.57 6.43 6.35 6.37	-121.8 -170.9 -171.1	5.05	4.8	Sample
			_								
Developement Sample Field		nt If any aliqu	ambigui	ty could ext e approprie	ist, be sur	e to indi	cate the f				
Field Decontar Waste Contain Additional Con	er ID	283	s/No		with wha	:?					
Field Personnel	- Marian	ate Emn				Clarke D'Amico)		Sign.	ature	7



LEA Comm	. No. 8	8UT907	7.001							Page	13 of 17
Project	Ţ	JTC P&	W Willow	pond Quar	terly GW	Mon.					e/2/8/09
Location				d, East Har							ele Time /Z :5
Client	P	ratt & V	Vhitney D	ivision - JT	ot		,,,	1770			7085c
Monitorin	g Well Nu	mber \	NT-M	W-50	Samp	le Numb	er(s)1136			11360	
Initial Field	Data and	Measu	rements			70/					
Depth of W	ell	2,60		Reference		TOR					
Depth to W				PID/FID F							
Height of C	olumne	1.97		Interface			o II ye	s, Depth		L18	ghter / Heavier
Well Casing Protector		Box / St	ickin)	Materia	1 _/	VC			Condition Secure	on OK	Bad
Ground to			- Chup						Intact		
Comments		0		-					Locked		
	,								(describe	()	
								Outer	(40001100	7	
Developmen		ition	_								
Paramet	Depth to Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
1130	NIA	300	100	0	7.84	9779	7.14	-87.9	1.43	405	Initial
1135					7.51	4315	7.07	90.7	1.96	50.4	1
1145					2.43		6.91	-174.7	1.39	36.7	
1135	1 1 -				7.30		A CONTRACTOR OF THE PARTY OF TH	-141.8	1,37	21.8	
1705						4611	6.71	-1655	1.36	16.7	
1715					7.78	4605	6.72	-169.9	1.31	8.6	
1275					7.77	4601		-170.5		8.2	
1235					7.27	4679	6.74	176.2	1.21	5.1	
1245					7.78	4598	6.74	-178.9		4.8	
1730				4	7.77	4597	6.74	-176.7	1.18	3.1	+
1255	4	4	4	8.5	7.77	4598	6.74	-177.8	1.19	7.9	Suythe
					/		-		\	-	
				/	2						
				()							
				/							
	-			/							
											1
Developeme	ent Method	Perist	altic Pum)/ Bailer /	Inertial P	ump / Ot	her				
Sample Field	d Treatmer			ty could ext							
			hain of Ci				100				
Field Decon Waste Conta			s (No)	If Yes,	with what	t?					
Additional C	Comments										
Field Personn	al M	ate Emn	ione		Alan	Clarke			Ciarr	atura d	11 10
iciu reisonn	100	Transfer Control				D'Amico			Sig <u>n</u>	ature	1///
	C.	. Scott B	IOWII		Kich	DAMICO			/	7/1	1/1



LEA Comm. I Project Location	J F	&W Eas	W Willow st Hartford	pond Quar l, East Har	tford, CT					D	ge 14 of 17 ate 12/4/09 nple Time 15:0
Client	F	Pratt & V	Vhitney Di	vision - JT	`ot						
Monitoring	Well Nu	mber 4	17-MW-4	7	Samp	le Numb	er(s) 1136	6017		136017	Ut
Depth of Wel Depth to Wat Height of Col Well Casing I Protector Ground to Re Comments	ll / er lumn S Diameter	4.35 9.35 -00 BOX/ St	ickup	Reference PID/FID I Interface Materia		Joc o.e Yes/N		General Casing Collar Cover	Conditions Secure Intact Locked (describe	on O	
Development	Informa	ation									
Parameter	Depth to Water	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	
14:10	-	300	B00 1	6	- 5 to	art Pu	9,7	_		>	
14:20	-	300	1.00 N	1.06	12.56	428	5.74	190.7	4.76	13.5	
14:30	_	300	100-1	202	12.64	424	5.74	195.0	4.77	11.6	
14:40	-	300	10021	3.06	12.80	429	5.67	210.7	4.76	6.02	
14:50		300	100x1	4.02	12.72	424	5.65	219.6	4.73	5.10	
14.53	-	300	100-1	4.36	12.71	428	5.65	223.5	4.71	4.78	1
1456	-	300	10001	4.66	12.74	428	5-65	228.6	4.68	4.12	1. 1
15:00	-	300	100-1	5.0i	12.72	430	5.66	231.4	4.66	4.03	Sumply
	1										
	*			/							
				1							
					`						
Developemen	t Method	1 Perist	altic Pump	▶ Bailer /	Inertial P	ump / Ot	her _				
Sample Field		aliqu the C	ot with the hain of Ci	approprioustody!	ate suffix	in the sa					ach sample abel and on
Field Deconta Waste Contair		728	es / 100 342		with what				201		7.7
Additional Co	mments	Not	Able 1	check	k wat	er her	ne) cho	e to d	antter	ofw	//
ield Personnel	-	ate Emn	SA CARROLL SA			Clarke			Sign	ature	2
	1,C	. Scott B	rown		Rich	D'Amico)		-5	101.0	vous



LEA Comm. Project Location Client	Į I	P&W Eas	W Willow at Hartford	pond Quar d, East Har ivision - JT	tford, CT]	Page
Monitoring	Well Nu	mber _L	J7-MW-	42	Samp	le Numbe	er(s) 1136	8008		3600°6	υf
Initial Field I Depth of Wel Depth to Wat Height of Col Well Casing Protector Ground to R Comments	ll ter lumn s Diameter Road	8.75 3 50 3.73 1 0.5° Box/St		Reference PID/FID F Interface Materia	Reading	Yes/Q	d If ye	Casing Collar Cover	Condition Secure Intact Locked (describe	on	Lighter / Heavi
Development	Informa	ation									
Parameter Time		Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbid (NTU	Comment
10:40	-	300	100	6	_	Sto	-t Pur	17		7	
10:50	-	300	100	1.02	12.74	366	5,91	165.3	6.48	26.4	
11:00	-	300	100	z.06.	13.43	340	5.73	187.1	6.02	8.39	
11:10	-	300	100	3.02	13.Z6	384	5.68	204.1	5.89	5,41	
11:13	-	300	100	3.36	13.30	345	5.69	210.5	5.81	4.12	
11:16	-	300	100	3-66	13.32	347	5.71	2/3.7	5.76	3.86	
11:20	_	300	100	4.06	/3.32	390	5.68	215.4	5.73	2.79	Sampled
		22									
				/							
					1						
					1						
					,						
						1					
						,					
Developemen	t Method	d Perista	iltic Pumi	▶/ Bailer /	Inertial P	ump / Ot	her _				
Sample Field Field Deconta Waste Contain	mination	alique the Co		appropria ustody!		in the sai					each sample label and on
Additional Co	mments			Check	water	· level	du	to di	ancte-	of a	well.
ield Personnel	l N	ate Emm	one		Alox	Clarke			Cian	atura	
eid rersonne		. Scott B				D'Amico				ature	<i>p</i> .
	30	. Scott B	IUWIN		KICH	D AIIIICO			5	in IT A	THOUSE



Monitoring '	137 H 37	Tall oc v		d, East Har ivision - JT	tford, CT	Mon.					ate 12/4/0 nple Time 13:
	well Nu	mber	w7-mw	41	Samp	le Numbe	er(s)1136	009		113600	9 of
nitial Field D Depth of Wel Depth to Wate	1	9.47		Reference PID/FID F							
Height of Col				Interface		Yes / No	9 If ye	s, Depth		L	ighter / Heavie
			<i>b</i>				,	56 18			Table 1
Well Casing I				Materia	Pu	· E			Conditio	Acres 1	K Bad
Protector		Box St	іскир						g Secure	X	
Ground to Re	eference	100							Intact	×	
Comments				- A-					Locked	×	
				-				Other	(describe)	
evelopment	Informs	ation									
Parameter		Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	
Time				<		-	0.	,			-
12:20	-	300	100		12.68	Stan	- 0	134.5		1120	+
12:30		300	100	1.02		1202	6.31	-	1.55	4.35	
,2:40	-	300	100	2.04	12.77	1239	6.30	141.6	1.71	4.10	
12:50	-	300	100	3.06	12.80	1240	6.30	146.6	1.40	3.63	
12:53	-	300	100	3-36	12.76	1310	6.30	152.3	1.45	3.17	-
12:56	_	300	:00	3.66	12.75	1337	6.30	155.9	and the same of th	2.83	1
13:00	_	300	100	4.06	12.74	1350	6.30	160.6	1.97	2.20	sampled
7											
1	~										
		1									
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evelopemen	t Method	Periet	altic Pum	A/ Railer /	Inertial D	umn / Ot	her				
ample Field		nt If any	ambiguii	ty could ext e approprie	ist, be sur	e to indi	cate the f				ach sample abel and on
ield Deconta Vaste Contair		1? Ye	342	If Yes,	with wha						
dditional Co	mments	Not ,	Able to	check b	vatir /	ével o	lve to	diame	ter of	well.	
eld Personnel		ate Emn				Clarke D'Amico				ature SS co	



roject location	1	P&W Eas	W Willow st Hartford	pond Quar d, East Har ivision - JT	tford, CT					Da	e
Monitoring	Well Nu	imber _	607-MW	13 43	Samp	le Numb	er(s)1136	5007		1360071	υf
nitial Field I Depth of We Depth to Wat Height of Co. Well Casing Protector Ground to R Comments	ter S lumn 3 Diamete	90 8.81 209 r o.s.	, tickup	Reference PID/FID I Interface Materia		Yes / 🗓		General Casing Collar Cover	l Condition g Secure Intact Locked (describe	on OF	ghter / Heavie
evelopment	Inform	ation						Other	(deserror	9	
Parameter	grand delastication in the contract of	Pump Setting	Purge Rate (mL/min)	Cum, Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
9:10		300	100	-	_	5+0-	+ Pur	12	_	-7	
9:20	-	300	100	1.0L	12.57	439	6.29	78.5	9.31	15.6	
9:30	_	300	100	2.01	12.55	441	6.20	98.4	10.12	7.38	
9:40	-	300	100	3.01	12.56	144	6.19	110.2	11.45	5.56	
9:43	-	300	100	3.34	12.52	448	6.19	113.6	11.90	4.10	
9:46	-	300	100	3.64	12.53	450	6,19	115.Z	12.07	3.86	
9:50	-	300	100	4-0i	12.54	451	6.19	117.1	12.30	3.22	Surphel
	2										
				1							
					1						
	. 3.6 .1	1000	let B	V/D "			1				
Developemen Sample Field		ent If any aliqu	ambigui	ty could ext e approprie	ist, be sur	re to indi	cate the f				
ield Deconta Vaste Contai		725	es/100 8342		with what						
dditional Co	omments	s Net	Able to	check	water	level i	duc to	diame	ter of	w-11	
eld Personne	1 N	late Emn	nons		Δlev	Clarke		_	Cian	ature	
id i disoinie	1,000	. Scott B	AND A COLUMN TO THE PERSON OF			D'Amico	-			HB0	



HAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST - BUILDING ONE

MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #: KBZ/ 2009 - 453

ACCUTEST QUOTE #:

	CLIENT INFOR	MATION			FAC	ILITY INFO	ORMA	TION			(50)	797			ANA	LYTI	CAL IN	FORM	ATION	1		MATRIX CODES
100 A		TATE mikinny		PROJECT PROJECT PROJECT PROJECT	790°	7.00	1		_			_		13 8260 C		12 8082 (EV)	15 RCRAS 1 C., N., Zn					DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST				CC	LLECTION		MATRIX	DF TLES	PR	ESEF	₹ III	ON		0	1	63	1/2				L	SOLID
SAMPLE #	FIELD ID / PO	INT OF COLLECT	ON	DATE	TIME	SAMPLED BY:	MAT	# OF BOTTLES	HC	HNO.	H2SO	10		1	3	M	13				Γ	LAB USE ONLY
	1136013			12/8/09	1755	150	GW	- Table 1	X	T		X		X								
i	1136013			1	-	1	1	4				X			X	X	1					14
	113601304						\vdash	1	П	X	\Box	X	T	\dashv	7.	-	X .					
	1136028						T	3	χ		\top	X		X	_	1		\dagger	_			
	1136028		-		1		+	4	1	+	\vdash	λ	\vdash		X	X	_	+	+			
	11360785	. ,		-		\vdash	+	1	H	X	\vdash	X	+	+	-	/	X	+	+	+	\vdash	
	1				4		+	7	V	1	+	y v	-	X	\dashv	+	-	+	+		+	
	113604			\vdash	1570	-	\vdash	4	Α	+	\vdash	1	+	$\overline{}$	Х	V	-	+	+	+-	\vdash	
	1136014			\vdash		-	\vdash	4	Н	V	\vdash	~	\vdash	+	-	4	x	+	+	+	\vdash	
	113601407			4	4	4	4	/	Н	Λ	\vdash	X	\vdash	+	+		1	++	+	-	-	
							-	-	Н	+	H			_	-	-		+	+		\vdash	
					(A)			-	+	-												1.20
2 100 2	DATA TURNAROUND	INFORMATION	3.E 5.5%	E Torrell	DATA DEI	IVERABL	E INF	ORMA	TIO	N				15	8		СО	MMEN	TS/RE	MARKS		
☐ 7 DAYS ☐ 48 HOU ☐ OTHER 14 DAY TURN	S STANDARD S RUSH IR EMERGENCY MAROUND HARDCOPY. S PREVIOUSLY APPRO	EMERGENCY OR RU	=	☐ DISK I	IERCIAL "I	BLE														1.sts RCP		lois and :
1	1 11	AMPLE CUSTODY	The Control of the Co		ED BELOW					HAN	GE P	-		Charles Harris	LUDI				VERY	410	SER	
1.	BY SAMPLER:	12/8/61 1650	1. D	Mul!	/	2.	NQUISH	EO BY:				DA	TE TIM	E:		2.	EIVED B	ν:				- MARINE
RECINQUISHED	ВУ	DATÉ TIME:	RECEIVED	BY:		RELII	NQUISH	ED BY:				DA	TE TIM	E:	1	REC	EIVED B	Y:				
RELINQUISHED	D BY:	DATE TIME:	RECEIVED	BY:		SEAL											PLICABI	LE		ON ICE		TEMPERATURE



RELINQUISHED BY:

RELINQUISHED BY:

3.

DATE TIME:

3.

5.

RECEIVED BY:

ACCUT	EST	JOB	#:

	Laboratories			MARLBOR 508-481-620		7			3				KBZ/Z	009-45°	3
	CLIENT INFORMATION		FAC	CILITY INFO	ORMAT	TION						AN	IALYTICAL INF	ORMATION	MATRIX COD
ADDRESS Flower CITY,	Evanuering Associates Hurst Drive IL CT Cloolo2 STATE ZIP Edoin McLinney (LEA)	PROJECT PROJECT PROJECT FAX #	&%∪ NO.	F097		_	<u>S</u>	vict	er	-	Py Salects	(a. 1. Su.S. 7	websec N. Z.		DW - DRINKIN WATER GW - GROUN WATER WW - WASTE WATER SO - SOIL SL - SLUDGI OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST	-	CC	LLECTIO	N	XIX.	LES	-	SERV	Townson in	N	1	N C	14		SOLID
SAMPLE #	FIELD ID / POINT OF COLLECTION	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	NaOH HC	HN03	NONE	766	7	A	100		LAB USE ON
	1136011	12.8.09	1100	AC	GW		X			X :	×				
	1136011		1100	d	1	4				X	X	X			
7	11360114		1100			1		X		X			X		
,	1136012		1310			Z	χ			X	X				
,	113602		1310	1	IV	ч				X	X	X			di di
Texas	3 11360124		1310	1/0	1	1		X		X			X		
(P)-	1136010		1515		-	2	X	+		X	×				
(pur)	1136010	1	1515	+	V	4				X	X	X	-		
(00)-	1136010LP	128-00	1515	THE	GW	1	+	X		X	_	-	X		
										-					
															2
	DATA TURNAROUND INFORMATION		DATA DE	LIVERABL	E INFO	ORMA	TION		Seal.		NE	Total	СОМ	MENTS/REMARK	(S
D 7 DAYS D 48 HOU D OTHER	APPROVED BY: S RUSH IR EMERGENCY MARQUID HARDCOPY, EMERGENCY OR RUSH IS FA	DISK	MERCIAL 'DELIVERA'E FORMS	ABLE					_		PCS	de s.'	CT PCPC	malytical Dide Da	lists for Voc Prepart.
	SAMPLE CUSTODY MUST		ED BELOV				S CH	IANGE	POS		ION, IN	CLU	DING COURIER	DELIVERY	
1.	DATE TIME: RECEIVED BY SAMPLER: DATE TIME: RECEIVED BY SAMPLER	SAIIT-		2.	NQUISHE	1,15		- di			TIME:	Ģ.,	2. RECEIVED BY:		

PRESERVE WHERE APPLICABLE

ON ICE

TEMPERATURE



3 of 4

CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

KB 2/ 2009 - 45

ACCUTEST QUOTE #:

	. CLIENT INFO	RMATION			FAC	LITY INF	ORMA	TION				300	Г		AN	ALYTIC	AL INC	ORMA	TION			MATRIX CODES
NAME 100 Non ADDRESS Planyl CITY, SEND REPORT T PHONE #	LEA H west P IL C Robin N	Prive 7 00 STATE Ne kinney	7062 ZIP	PROJECT PLUCATION PROJECT	PEW Win NAME East Ha	llowpor	d Qu	iarter	14	6W	mo	1.7	42608	ETPH	2.	gretak, W. Zn	CIA INT	StimA				DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST		9		CC	DLLECTION		¥	LES	PR	ESE	RVAT	ION	13	17	. 5	RLAA					- 1	SOLID
SAMPLE #	FIELD ID / P	OINT OF COLLECT	TON	DATE	TIME	SAMPLEI BY:	MATRIX	# OF BOTTLES	Ŧ	NaOH HNO3	H2S04	T 4	Voca	12	PCB's	Total						LAB USE ONLY
	1136007			12/8/09	9:50	CSB	GW	4		T		X	T	×	×							
	1136007			12/8/09	9:50	CSB	GW	2	×			X	×									
	1136007 Uf			12/4/09	9:50	csis	600	1		X		X				7						
	1/36008			12/8/09	11:20	C513	6w	4				Х		+	7							
•	1,36008			12/8/09	11:20	CSB	60	2	×			×	×					-				*
,	1136008 of			12/4/09	11:20	C575	60	ŧ		X		×	Γ			1						
*	1/36009	nt -		12/8/09	13:00	CSB	60	4			П	1		,4	f					,		3
3	1/36009			12/8/09	1300	C5/5	Cw	2				X	×									
ž	1136009Uf			12/8/09	1300	(573	Gw)				X	L			*						
162	1136617			12/8/09	1500	15K	Cw	4				×		×	×							
,	1/36017			12/8/09	1500	(5 h	62	2				X	X									
-	DATA TURNAROUN	D INFORMATION		The same of	DATA DEL	_		ORM	ATIO	N				1 27		1000	COM	MENT	S/REM	IARKS		
☐ 7 DAYS ☐ 48 HOUI ☐ OTHER 14 DAY TURN	S <i>RUSH</i> R EMERGENCY	. EMERGENCY OR RU		☐ DISK I	MERCIAL "E	BLE										TRC d Pr						locs and
Del Maria	The state of the s	SAMPLE CUSTOD			ED BELOW	-	-		ALL STREET	HAN	GE P				CLUE			DELIV	ERY			with the contract
1. ST	K-	12/8/09	1. B	16/		2.	INQUISH						ATE T			2.	VED BY:					
RELINQUISHED 3.	BY:	DATE TIME:	RECEIVED E	BY:		REL	INQUISH	ED BY:				D	ATE T	ME:		A.	VED BY:					
RELINQUISHED	BY:	DATE TIME:	RECEIVED E	BY:		SEA	Le						F	PRESE	RVE W	HERE API	LICABLE			ON ICE		TEMPERATURE



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CHAIN OF CUSTODY

495 TECHNOLOGY CENTER WEST • BUILDING ONL MARLBOROUGH, MA 01752

TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST JOB #:

KB 2 / 2009 · 4 ___

ACCUTEST QUOTE #:

	2400141	, , , , ,		_					-		-			-	_							-	
	CLIENT INFO	RMATION	الطيوال		FAC	ILITY INFO	ORMA	TION		1					AN	ALY	ICAL	INFO	RMATI	ON		MAT	RIX CODES
ADDRESS	Robin Mc	CT 06 STATE Kinney	6067 ZIP	PROJECT DE	Eas 88 NO.	+ Har UTC	Hore)					DC 5260 RW	S ACAR 8+ Cu. N. In	Bs 8082	ETPH						GW WW SO SL- OI- LIQ	- DRINKING WATER - GROUND WATER - WASTE WATER - SOIL SLUDGE OIL - OTHER LIQUID - OTHER
ACCUTEST				CC	LLECTION		NX.	F	_	RESE	_	_	Z	121	2	1							SOLID
SAMPLE #	FIELD ID / PO	OINT OF COLLECTI	ON	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLE	포	NaOH HNO3	H2SO4	TOE		Me								LAE	USE ONLY
J	1136015			12/8/09	13:00	NE	6W	6	2		1	16	X		X	X							
10	1136015	- PU			13-00		1	1		1	Ц	1		X									
	1136016	,			15:05			6	2		1	16	X		X	X							
391	1136016	of.			15:05			1		1	П	1		X								120	18.4
,	1136027				15:50			6	2			16	X		X	X							
1	113602	7 UF			15:30	V		1		1		1		X									
9	1136026			1	10:00	Nn	X	1	1			1	X										
	1136017	v+		12/4/09	15:00	6513	64	1		1		F		×									
									Ц		Ц		L										
									Ш	1	Ц		L									\perp	
[DATA TURNAROUN	D INFORMATION			DATA DEL	IVERABL	E INF	ORM	ATIC	N								ОММ	ENTS/	REMA	RKS		2.93
☐ 7 DAYS ☐ 48 HOUF ☐ OTHER 14 DAY TURN	S STANDARD S RUSH R EMERGENCY AROUND HARDCOPY. S PREVIOUSLY APPRO	EMERGENCY OR RU		☐ DISK I	DARD IERCIAL "E DELIVERAI E FORMS R (SPECIF	BLE																for y	pes and t
- 12 S.S.		SAMPLE CUSTODY			ED BELOW				_	HAN	GE P				CLUI			-	ELIVE	RY			
1. A oto F	BY SAMPLER:	12/8/09 16:15	1. B	BY:	16:50	2.	NQUISH	ED BY:				D	ATE TI	ME:		2	CEIVE	BY:					
RELINQUISHED	THE RESERVE OF THE PARTY OF THE	DATE TIME:	RECEIVED 3.	BY:		_	NQUISH	ED BY:	84			D	ATE TI	ME:			CEIVE	BY:					
RELINQUISHED	BY:	DATE TIME:	RECEIVED	BY:		SEAL							P	RESE	RVE W		APPLICA	ABLE		0	N ICE	1	EMPERATURE
5.			5.													beard					hone	- 1	с



DAILY FIELD REPORT

Loureiro Engineering Associates, Inc.

LEA Com Project		88UT907.001 JTC P&W Willo	wnond C	Duarterly GV	V Mo	n			1 of 7 12/9/09
Location		&W East Hartfo						Date 2	217101
Client		Pratt & Whitney							
Arrived at				om Site	300	vehi	cle Persona	1	
Site Activitie	A. 2. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1.		parted II	om one _	011		eter (Start)Re	turn	
	ampling		Geoprobe	Work			roject Information	_	
	dwater Samplin	ng .	Concrete				ple Number Used	11560	17.1
	e Water Sampl		Construct				ation ID Used	WT-M	
	/Air Sampling			nagement			Location (if not complete		2 34
	ete Sampling		***************************************			Sampling			PCB. metals
1 200	Sampling	-	Inspection	v.		79	ries used	Acces	ect moinis
	Sampling		Site Walk				rk & Equipment left at/i	n at all	ost Fice
Other	Sampling	-	Surveying			Site Con		T. C.	TI
Wall I	Development		Other (De				ors on Site	LEA	Thomspo-
Non-product			Other (De	scribe)		Contract	ors on site	LET	
	ive Time		Wester			T:	1 -1 to word contract		. · Ł.
1			Weather			I ime and	d place to meet contractor	ors 4:30 or	15,12
1 200	ment Breakdow	n i	Missing E						
Late	4		Other (De	scribe)		- FO C. LO	2.2		
The second second	rance Checks					Residuals Dispo			
Yes N/A						Item	Approx. Amount	Contain	er ID
)	-	abels complete				Soil/Solid			
>		cooler seals OK				Groundwater	5 Gulb	7283	42
>		les obtained				Decon Fluid			
>	Chains o	f custody				PPE			
> >	All form	s/logs complete				Other			
>	Site cond	lition OK	Weather 0	Conditions					
7	Site H&S	S Plan on site	Tempera	ture 30'	s	Precipitation	sket/Rain Wi	ind	
×	Instrume	nts calibrated	Commen	ts			,		
Roba Me	ctiney								П
Expendable I	Items Used				Equ	ipment Used			
Qty Item				LEA Number	Qty	Item			LEA Number
Bailer, D	Disposable (spec	cify size)		090		Generator 3500	Watt		153
	losed Top 55 G	allon		086		Meter, Conducti			022
Filter, In				024		Meter, pH/Temp			021
	neous Health &	Safety Items		060	1		mall Tools & Equipmen	ıt	152
A CONTRACTOR OF THE PARTY OF TH	1/2", NOS			007	-	Pump, Grundfos			073
Water, D	3/8", NOS			008	i	and the second s	c (spec. Master or Isco)		040 201
water, D	ristilled			025	+	Pump, Submersi Pump, Watera	ole		038
					1	Turbidimeter			023
						Actual Control of the	Photovac 2020 (PID)		012
					2	Water Level Ind			028
					1	Water Quality N	feter w/Flow Cell		070
					1				
D. 11.5				10.41	-				
Field Person		ate Emmons			Clar		Signat	Brown	
	C	. Scott Brown		Rich	D'A	mico	Sieto	Brown	



DAILY FIELD REPORT

Supplemental Sheet

LEA Comm. No.	88UT907.001		Page 7 of 7
Project	UTC P&W Willow	pond Quarterly GW Mon.	Date 12/9/09
Location	P&W East Hartfor	d, East Hartford, CT	
Client	Pratt & Whitney D	vivision - JTot	
Description of Si	te Activities		
F:30-ons.	ke.		
· Calibrate	Equipment	Sampling on remaining bround	
8150- Sta-	t Ground water	Sampling on remaining bround	water Wells
13:00 fin 13	1 samply	, ,	
13:10 - take	care of waste		
13:10 - /earc	58~		
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		1	
Field Personnel	Nate Emmons	Alex Clarke	Signature SAPS~
	C. Scott Brown	Rich D'Amico	5 201 ~



DAILY FIELD REPORT CALIBRATION RECORD

Project U Location P	8UT907.001 JTC P&W Willowpond Quarter &W East Hartford, East Hartfo Pratt & Whitney Division - JTot	rd, CT	ž		¥ II		Page 3 of > Date 12/9/09
pH Meter/Serial # Initial Calibration	0261124 AF Time 8:40	pH 4.01	рН 7.00 7.00	pH 10.01	Spec. Cond.	ORP 99.6	DO
Calibration Check Calibration Check							
Turbidity Meter/Serial	# 3<2.\ Time	ONTH	20 NTU	100 NTH	200 NITH		
Initial Calibration Calibration Check Calibration Check	8°:35	0 NTU	20 NTU	100 NTU	800 NTU		
PID Meter/Serial #		_					
Initial Calibration Calibration Check Calibration Check	Time	Standard	Meter Reading	Zero with			
Balance/Serial # Initial Calibration Calibration Check Calibration Check	Time	Standard	Balance			Ð	
Comments				\			<u> </u>
	Nate Emmons C. Scott Brown	Alex Clarke Rich D'Amico				Signatur Sev	e Br



LEA Comm.	No. 8	8UT907	.001							Pag	ge 4 of 7
Project	Ţ	JTC P&	W Willow	pond Quar	terly GW	Mon.				Da	ate 12/19/09
Location	F	&W Eas	t Hartford	l, East Hart	tford, CT					San	ple Time 9 :
Client	P	ratt & W	/hitney Di	ivision - JT	ot						
Monitoring	Well Nu	mber ⊿7	- MW-4	6	Samp	le Numbe	er(s) 1136	5019		36019uf	
Initial Field		A CONTRACTOR OF THE PARTY OF TH	ements	n 2		700					
Depth of We	=1	2.67		Reference	Used	20					
Depth to Wa	iter7	.06		PID/FID F	Reading	0-) 10	D. d.			· 1 . / TY
Height of Co	olumn_5.	58		Interface		Yes /N) If ye	s, Depth		1	ighter / Heavie
Well Casing	Diameter	0.5		Materia	1 P	VC		General	Conditio	on O	K Bad
Protector	Road	Box/St	ickup					Casing	s Secure	×	
Ground to F	Reference	700						Collar	Intact	×	
Comments								Cover	Locked	X	
								Other	(describe)	
Developmen		ation									
Paramete	Depth to Water	Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
8:50	-	300	100	-	_	Start	pung	8-	~		
9:00	-	300	100	1.06	9.64	408	745	48.5	13.4	7.35	
9:10	-	300	100	2.02	9.70	412	7:50	49.9	11.6	5.73	
9:20	J	300	100	3-06	9.72	418	7.51	526	10.3	4.02	
9:23	-	300	100	336	9.71	420	7.50	53.1	9,6	4.60	
9:26	-	300	100	3.66	9.68	421	7-44	54.6	9.1	4.06	
			100	4.06	9.65	422	7,49	55.6	8.6	362	Sa-plan
	~										
	,	N									
			1								
				1							
						1					
<u></u>				(m. 1)		10					
Developeme		_	_ ~-								
Sample Field	l Treatme	aliqu		approprie							ach sample abel and on
Field Decont Waste Conta			3 4 1×3	If Yes,	with what	?					
dditional C	omments		,								
eld Personne		late Emn			Alex	Clarke				ature	
	Q	. Scott B	rown		Rich	D'Amico	1		500	4B	



Project Location Client	1	P&W Eas	W Willow st Hartfore	pond Quar d, East Har ivision - JT	tford, CT						Date	_5_ of _ e_/ <u>7/40/0</u> 0 le Time:
Monitoring						le Numb	er(s) 1136	5020		1136	020	vf
Depth of We Depth to Wa Height of Co Well Casing Protector Ground to F	ell	17.60 14.41 3.19 r_1.5" Box/St		Reference PID/FID I Interface Materia		Yes /N) If ye	General Casing	Condition of the Condit	on	Lig OK	hter / Heavid Bad
Comments			-					Cover	Locked	1	1	
								Other	(describe	e)		
Developmen	t Inform	ation										
Paramete	10	Pump Setting	Purge Rate (mL/min)	Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)		idity (TU)	Comment
10:20	14.37	300	100	-		Start	Purgy	-		9		
10:30	14:34	300	100	1-04	12.39	797	Purgy 6.96	-96.3	5.57	25.	2 :	
10:40	14.38	300	100	2.04	12.46	912	7./0	-90.1	5-99	18-	6	
10150	14.38	300	100	3-02	12.50	830	7.07	-84.7	6./2	9.3	8	
11:00	14:39	300	100	4.06	12.54	845	7.07	-78.6	6.30	7.10		
11:10	14:39	300	100	5.06	12.56	853	7.07	-7/. 3	6.44	5.3		
11:13	14:39	300	100	5.32	12:55	854	7.07	-68.7	6.48	5.0		
11:16	14:39	300	100	5.66	12.56	856	7.06		6.52	4.9		,
11:20	14:39	300	100	6.01	12.55	857	7.06	-61.9	6.55	4.7		sample
			,									
						\						
)ovala	nt M-+1-	d Desire	lai a D	/ Da!!/	In aut 1 D	/ 0:						
Developemen	Testil.					. 73						
Sample Field	Treatme	alique		appropria								
ield Decont Vaste Contai		1? Ye	s/00 342	If Yes, v	vith what	?						
dditional C	omments	i										
eld Personne	l N	late Emm	ions		Alex	Clarke			Sign	ature		



LEA Comm Project Location Client	· [P&W Eas	W Willow st Hartfor	pond Quar d, East Har ivision - JT	tford, CT					Dat	e 6 of 7 te 12 / 9 /09 ole Time 12:4
Monitorin	g Well Nu	mber	WT-MW.	59	Samp	le Numb	er(s) 1136	021	1	136021	uf
Initial Field Depth of W Depth to W Height of C Well Casing Protector Ground to Comments	dell dater della d	7.60 12-95 1.65 1.55 Bos/St	ickup	Reference PID/FID I Interface Materia		Yes/10		Casing Collar Cover	Condition 3 Secure Intact Locked (describe	on Ok	ghter / Heavier C Bad
n .								Other	(uesci io	5)	
Paramet		Pump Setting		Cum. Liters Purged (L)	Temp (C)	Spec. Cond. (uS/cm)	pH (SU)	ORP (Eh)	DO (mg/L)	Turbidity (NTU)	Comment
11:40	13:00	300	100	~	~	Stan	+ pur	+4 -		7	
1150	12.97	300	100	1.04	13.76	4096	100000000000000000000000000000000000000	28.9	3.36	19.2	
12:00	12:87	300	100	2.06	13.80		6-97	21.3	2.12	14.6	
12:10	1297	300	100	3.06	13.82	3378	6.96	17.6	1-93	8.34	
12:20	12.97	300	100	4.04	13.81	3166	6-97	14.1	1.68	6.08	
12:30	12.97	300	100	5.04	13.81	2912	6.98	11.7	1.40	4.90	
12.33	12.97	300	100	5.36	13.80	2810	7.01	9.3	1.12	4.73	
12.36	12-97	300	100	5.66	13.78	2755	6.97	8.6	1.01	4.12	
12.40	12-97	300	100	6.02	13.81	2693	6.99	7.0	, 89	4.03	Sayples
			Su								
						/					
	1										
Developeme	ent Method	d Perist	altic Pum	Bailer /	Inertial P	ump / O	ther				
Sample Fiel		aliqu the C		e approprioustody!		in the sa					
Waste Conta	ainer ID	_ > =	8342								
Additional (Comments	S									
Field Personn	-	late Emn				Clarke D'Amico			Sign	ature	



FIELD SAMPLING RECORD MISCELLANEOUS SAMPLES

LEA Comm. I Project Location Client	No. 88UT907.0 UTC P&W P&W East I Pratt & Wh	Willowpo Hartford, I	East Hartf	ord, CT	Mon.	Page Dat	e 7 of 7 e 12/9/09
Sample ID	Location ID	Time	Sample Type		PID/FID Reading	Comments	Waste Cont. ID
1136025	TripB/and	9:00	BKT	_	-	Trip Blank	
	1	+					
		1					
		-					
	p. 1		1				
				1			
					/		
		1					
						\	
		-					
						1	
Field Personne	Nate Emmo			Alex (Clarke D'Amico	Signature	~



LEA Comm. No.	88UT907.001	10 1 00011		Page _	of	
Project		oond Quarterly GW Mon.		Date_	/_//	_
Location Client	P&W East Hartford			Sample	Time:	
Chem	Pratt & Whitney Div	VISION - J I OL			-	-
						A
	⊘ERA	USA 800-372-0122 EUROPE 44 (0) 161 946 2777				
	A Water Company	eiro Engineering		E#1:		
	The second contract of	lustom Volatiles				
1136024	P	reserved w/ HCI				
.,-	Samp	ole ID # 0908-09-02A				
	Children of the Control of the Contr	Contractor of the Contractor				
				4		
	/	USA 800-372-0122 EUROPE 44 (0) 161 945 2777				
	<u> </u>	<u>una</u>	N.			
	L	oureiro Engineering				
	2000	Dreserved W/ HOI		14		
1136024		Sample ID # 0908-09-02A				
,	9000					
	7400	Biologopera 4				
12						
		y .				
ield Personnel	Nate Emmons	Alex Clarke	Signatur	-		_
ioid i distillidi	C. Scott Brown	Rich D'Amico	Signatui			



CHAIN OF CUSTODY

495 TECHNOLOGY CENT! EST • BUILDING ON MARLBOROUGH, MA 01752 TEL: 508-481-6200 • FAX: 508-481-7753

ACCUTEST J	10B#: 12009-453	4 2
ACCUTEST (

Laboratorie	atories	
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1 B 1 B	CLIENT INFO	DRMATION			FAC	ILITY INF	ORMA	TION	10	630		-			AN	ALYT	CAL II	NFOR	MATIC	N		MATRIX CODES
NAME NO North Last Drive ADDRESS Plainville Ct 06062 CITY, STATE ZIP SEND REPORT TO: PHONE # 460-410-3000				FAX#								\$ 8260B	57011	280% 5	8 metals, 160, N. 2n						DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID	
ACCUTEST SAMPLE #	FIELD ID / F	POINT OF COLLECT	ION	DATE	TIME	SAMPLED	MATRIX	# OF BOTTLES	į	and the latest designation of	H2SO4	To the last live in the	Voc	CT	SCB	CRA						
	1136010					BY:	5w	2	ナ	žĪ	포 3	4	×		-	V	+	+	\vdash	+	+	LAB USE ONLY
	1136019			12/9/09	9:30	C5/3	6W	N		+	H	×		X	×	+	+	+		+		
	1136019 UF	2		12/9/09	9:30	(SA	6w	1		1	\forall	1			_	4	+	+		+	+	
	1136020			12/9/09		65/5	GW	2	2	1	\forall	,	2			-	+	+				
	1136020			12/9/09		65/3	6w	4		$^{+}$		1		×	7.		-	+		\dashv		
	113602001	0		12/9/09		(5/3	600	1	\Box	1	$\dagger \dagger$	1				X	+	\dagger		1	- 1	
	1136021			12/9/09		CSB.	600	Z	×		Ħ	×	X			-	1	1			+	
	1136021			12/9/09		15/3	GW	4			\forall	X		X	x		_	1		_		36
	113602107	f		12/9/09		15/5	60	1	П	1	H	X				×		1		7	T	
	1136025			12/9/09	9:00	cs/s	1.a	1	×		Ħ	K	X					T			1 1	7
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Appendix B

Copies of Laboratory Reports (provided on CD-ROM)







01/19/10

01/19/10

Technical Report for

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M81183

Sampling Date: 03/10/09

Report to:

Loureiro Eng. Associates

hmgrimm@loureiro.com

ATTN: Heather Grimm

Total number of pages in report: 153





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)

Reza Pand Lab Director

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Sample Summary

Job No:

M81183

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
M81183-1	03/10/09	14:45 CSB	03/10/09	AQ	Ground Water	1117643
M81183-2	03/10/09	14:45 CSB	03/10/09	AQ	Ground Water	1117643UF
M81183-3	03/10/09	12:45 CSB	03/10/09	AQ	Ground Water	1117644
M81183-4	03/10/09	12:45 CSB	03/10/09	AQ	Ground Water	1117644UF
M81183-5	03/10/09	10:15 CSB	03/10/09	AQ	Ground Water	1117645
M81183-6	03/10/09	10:15 CSB	03/10/09	AQ	Ground Water	1117645UF
M81183-7	03/10/09	10:35 LC	03/10/09	AQ	Ground Water	1117649
M81183-8	03/10/09	10:35 LC	03/10/09	AQ	Ground Water	1117649UF
M81183-9	03/10/09	12:35 LC	03/10/09	AQ	Ground Water	1117650
M81183-10	03/10/09	12:35 LC	03/10/09	AQ	Ground Water	1117650UF
M81183-11	03/10/09	14:00 LC	03/10/09	AQ	Ground Water	1117651
M81183-12	03/10/09	14:00 LC	03/10/09	AQ	Ground Water	1117651UF
M81183-13	03/10/09	12:00 LC	03/10/09	AQ	Ground Water	1117663





Sample Summary (continued)

Job No:

M81183

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
M81183-14	03/10/09	12:00 LC	03/10/09	AQ	Ground Water	1117663UF
M81183-15	03/10/09	12:00 LC	03/10/09	AQ	Ground Water	1117662
M81183-16	03/10/09	10:45 NE	03/10/09	AQ	Ground Water	1117646
M81183-17	03/10/09	10:45 NE	03/10/09	AQ	Ground Water	1117646UF
M81183-18	03/10/09	12:55 NE	03/10/09	AQ	Ground Water	1117647
M81183-19	03/10/09	12:55 NE	03/10/09	AQ	Ground Water	1117647UF
M81183-20	03/10/09	14:25 NE	03/10/09	AQ	Ground Water	1117648
M81183-21	03/10/09	14:25 NE	03/10/09	AQ	Ground Water	1117648UF





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M81183

Site: UTC: 2009 Quarterly GW-Willow Pond **Report Date** 3/23/2009 3:27:53 PM

21 Sample(s) were collected on 03/10/2009 and were received at Accutest on 03/10/2009 properly preserved, at 0.9 Deg. C and intact. These Samples received an Accutest job number of M81183. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSG3590

- All samples were analyzed within the recommended method holding time.
- Sample(s) M81205-7MS, M81205-7MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MS/MSD has compounds exceed RCP control limits (70-130%), but within in-house control limits. Refer to MS/MSD spike summary pages for detail.
- Initial calibration standard (batch MSG3531) for chloromethane, bromomethane, 1,1-dichloroethene, acetone, trans-1,2-dichloroethene, cis-1,2-dichloroethene, trans-1,4-dichloro-2-butene, naphthalene is employed quadratic regression.

Matrix AQ Batch ID: MSN1225

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81180-15MS, M81180-15MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for 4-Methyl-2-pentanone (MIBK) are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration standards in batch MSN1202 for acetone, 2-butanone, 2,2-dichloropropane is employed quadratic regression.
- MS/MSD has compounds exceed RCP control limits (70-130%), but within in-house control limits. Refer to MS/MSD spike summary pages for detail.

Matrix AQ Batch ID: MSN1226

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81180-14MS, M81180-14MSD were used as the QC samples indicated.
- Matrix Spike Recovery(s) for o-Chlorotoluene, p-Chlorotoluene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for o-Chlorotoluene is outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Recovery(s) for 1,2,4-Trimethylbenzene, m,p-Xylene, o-Xylene, Toluene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- MS/MSD has compounds exceed RCP control limits (70-130%), but within in-house control limits. Refer to MS/MSD spike summary pages for detail.
- Matrix Spike Duplicate Recovery(s) for Benzene, Ethylbenzene, Toluene, 1,2,4-Trimethylbenzene, 1,3,5-Trimethylbenzene, m,p-Xylene, o-Xylene are outside control limits. Outside control limits due to high level in sample relative to spike amount.

Matrix AQ Batch ID: MSN1227

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.



Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSN1227

- Matrix Spike Recovery(s) for Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MS/MSD has compounds exceed RCP control limits (70-130%), but within in-house control limits. Refer to MS/MSD spike summary pages for detail.

Matrix AQ Batch ID: MSN1228

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MS/MSD has compounds exceed RCP control limits (70-130%), but within in-house control limits. Refer to MS/MSD spike summary pages for detail.
- MS recovery for acetone is outside control limits due to possible matrix interference.
- Continuing calibration check standard for acetone, Dichlorodifluoromethane exceed 30% Difference. This check standard met RCP criteria.
- BS recovery for Freon 113 exceed RCP control limits (70-130%), but within in-house control limits. This is a "Problem Compound".

Extractables by GC By Method CT-ETPH

Matrix AQ Batch ID: OP18047

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M81179-6MS, M81179-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Extractables by GC By Method SW846 8082

Matrix AQ

Batch ID: OP18048

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) OP18048-MS/MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP13188

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81183-2DUP, M81183-2MS, M81183-2SDL were used as the QC samples for metals.
- RPD(s) for Duplicate for Cadmium, Copper, Lead are outside control limits for sample MP13188-D1. RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Serial Dilution for Copper, Nickel, Barium are outside control limits for sample MP13188-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</p>
- MP13188-SD1 for Barium: Serial Dilution RPD acceptable due to low duplicate and sample concentrations.
- Only selected metals requested.



Metals By Method SW846 7470A

Matrix AQ Batch ID: MP13200

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81183-4DUP, M81183-4MS were used as the QC samples for metals.

Note: Compounds whose reported QC limits are outside the CT Recommended Reasonable Confidence Protocol QC criteria are designated by the lab as "Problem Compounds". QC criteria for a "Problem Compound" may meet Accutest in-house generated QC criteria but exceed the RCP criteria (compounds exceeding Accutest QC criteria are flagged on the QC summary). Refer to the QC summary pages.

Unless otherwise noted, sample dilutions are performed in order to report the result within the calibration range.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M81183).



Sample Results

Report of Analysis



Client Sample ID: 1117643 Lab Sample ID: M81183-1

 Lab Sample ID:
 M81183-1
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33153.D 1 03/17/09 RT n/a n/a MSN1225

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

Compound	Result	RL	Units	Q
Acetone	ND	5.0	ug/l	
Acrylonitrile	ND	25	ug/l	
Benzene	ND	0.50	ug/l	
Bromobenzene	ND	5.0	ug/l	
Bromodichloromethane	ND	1.0	ug/l	
Bromoform	ND	1.0	ug/l	
Bromomethane	ND	2.0	ug/l	
2-Butanone (MEK)	ND	5.0	ug/l	
n-Butylbenzene	ND	5.0	ug/l	
sec-Butylbenzene	ND	5.0	ug/l	
tert-Butylbenzene	ND	5.0	ug/l	
Carbon disulfide	ND	5.0	ug/l	
Carbon tetrachloride	ND	1.0	ug/l	
Chlorobenzene	ND	1.0	ug/l	
Chloroethane	ND	2.0	ug/l	
Chloroform	ND	1.0	ug/l	
Chloromethane	ND	2.0	ug/l	
o-Chlorotoluene	ND	5.0	ug/l	
p-Chlorotoluene	ND	5.0	ug/l	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
Dibromochloromethane	ND	1.0	ug/l	
1,2-Dibromoethane	ND	2.0	ug/l	
1,2-Dichlorobenzene	ND	1.0	ug/l	
1,3-Dichlorobenzene	ND	1.0	ug/l	
1,4-Dichlorobenzene	ND	1.0	ug/l	
Dichlorodifluoromethane	ND	2.0	ug/l	
1,1-Dichloroethane	ND	1.0	ug/l	
	ND	1.0	ug/l	
1,1-Dichloroethene	ND	1.0	ug/l	
cis-1,2-Dichloroethene	ND	1.0	ug/l	
trans-1,2-Dichloroethene	ND	1.0	ug/l	
1,2-Dichloropropane	ND	2.0	ug/l	
	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane 2-Butanone (MEK) n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotehane Chlorotoluene p-Chlorotoluene p-Chlorotoluene 1,2-Dibromo-3-chloropropane Dibromochloromethane 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethene cis-1,2-Dichloroethene cis-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromodichloromethane Bromoform ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Carbutanone (MEK) ND N-Butylbenzene ND Sec-Butylbenzene ND Carbon disulfide ND Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotenane ND Chloroform ND Chloromethane ND 0-Chlorotoluene ND 1,2-Dibromo-3-chloropropane Dibromochloromethane ND 1,2-Dichlorobenzene ND 1,3-Dichlorobenzene ND 1,4-Dichlorobenzene ND 1,4-Dichlorotenane ND 1,1-Dichloroethane ND 1,1-Dichloroethene ND trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Benzene ND Bromobenzene ND Bromodichloromethane ND Bromoform ND Bromomethane ND 2.0 2-Butanone (MEK) ND ND S.0 N-Butylbenzene ND S.0 sec-Butylbenzene ND S.0 Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotoromethane ND Chlorotoromethane ND	Acctone ND 5.0 ug/l Acrylonitrile ND 25 ug/l Benzene ND 0.50 ug/l Bromobenzene ND 5.0 ug/l Bromodichloromethane ND 1.0 ug/l Bromoform ND 1.0 ug/l 2-Butanone (MEK) ND 1.0 ug/l n-Butylbenzene ND 5.0 ug/l sec-Butylbenzene ND 5.0 ug/l sec-Butylbenzene ND 5.0 ug/l Carbon disulfide ND 5.0 ug/l Carbon disulfide ND 1.0 ug/l Chlorob

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1117643

 Lab Sample ID:
 M81183-1
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 103% 79-130%

 $ND = \ Not \ detected$

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1117643

 Lab Sample ID:
 M81183-1
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



Page 1 of 1

Report of Analysis

Client Sample ID: 1117643

 Lab Sample ID:
 M81183-1
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25814A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume
Run #1 900 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.089 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 90% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117643

 Lab Sample ID:
 M81183-1
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15062.D 1 03/13/09 SL 03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 930 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l	
11104-28-2	Aroclor 1221	ND	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.27	ug/l	
53469-21-9	Aroclor 1242	ND	0.27	ug/l	
12672-29-6	Aroclor 1248	ND	0.27	ug/l	
11097-69-1	Aroclor 1254	ND	0.27	ug/l	
11096-82-5	Aroclor 1260	ND	0.27	ug/l	
37324-23-5	Aroclor 1262	ND	0.27	ug/l	
11100-14-4	Aroclor 1268	ND	0.27	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	110%		32-1	49%
877-09-8	Tetrachloro-m-xylene	120%		32-1	49%
2051-24-3	Decachlorobiphenyl	126%		30-1	50%
2051-24-3	Decachlorobiphenyl	124%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117643UF

Lab Sample ID:M81183-2Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	1	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	25.8	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117644

 Lab Sample ID:
 M81183-3
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33154.D 1 03/17/09 RT n/a n/a MSN1225

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1117644

 Lab Sample ID:
 M81183-3
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	S

103%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1117644

 Lab Sample ID:
 M81183-3
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Report of Analysis

Client Sample ID: 1117644

Lab Sample ID: M81183-3 **Date Sampled:** 03/10/09 Matrix: AQ - Ground Water **Date Received:** 03/10/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25815A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume Run #1 910 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.088 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 83% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank





Client Sample ID: 1117644

Lab Sample ID: M81183-3 **Date Sampled:** 03/10/09 **Matrix:** AQ - Ground Water **Date Received:** 03/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15063.D 1 03/13/09 SL03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

2051-24-3

2051-24-3

CT Polychlorinated Biphenyls RCP List

Decachlorobiphenyl

Decachlorobiphenyl

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l
11104-28-2	Aroclor 1221	ND	0.28	ug/l
11141-16-5	Aroclor 1232	ND	0.28	ug/l
53469-21-9	Aroclor 1242	ND	0.28	ug/l
12672-29-6	Aroclor 1248	ND	0.28	ug/l
11097-69-1	Aroclor 1254	ND	0.28	ug/l
11096-82-5	Aroclor 1260	ND	0.28	ug/l
37324-23-5	Aroclor 1262	ND	0.28	ug/l
11100-14-4	Aroclor 1268	ND	0.28	ug/l
~.~.		" ·	- "*	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	103%		32-149%
	•			
877-09-8	Tetrachloro-m-xylene	107%		32-149%

ND = Not detected J = Indicates an estimated value

116%

107%

RL = Reporting Limit B = Indicates analyte found in associated method blank E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

30-150%

30-150%



Page 1 of 1

Page 1 of 1

Report of Analysis

Client Sample ID: 1117644UF Lab Sample ID: M81183-4

Date Sampled: 03/10/09 Matrix: **Date Received:** 03/10/09 AQ - Ground Water

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/1 ug/l	1	03/11/09	03/12/09 EA	1	SW846 3010A 3
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EA	L SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242 (2) Instrument QC Batch: MA10245 (3) Prep QC Batch: MP13188 (4) Prep QC Batch: MP13200



Client Sample ID: 1117645

 Lab Sample ID:
 M81183-5
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33206.D 1 03/19/09 RT n/a n/a MSN1227

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1117645

 Lab Sample ID:
 M81183-5
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane

102%

79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1117645

 Lab Sample ID:
 M81183-5
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	104%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Client Sample ID: 1117645 Lab Sample ID: M81183-5

Date Sampled: 03/10/09 **Matrix:** AQ - Ground Water **Date Received:** 03/10/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25816A.D 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume Run #1 890 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.090

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 87% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117645

 Lab Sample ID:
 M81183-5
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15064.D 1 03/13/09 SL 03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 930 ml 5.0 ml

Run #2

2051-24-3

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l
11104-28-2	Aroclor 1221	ND	0.27	ug/l
11141-16-5	Aroclor 1232	ND	0.27	ug/l
53469-21-9	Aroclor 1242	ND	0.27	ug/l
12672-29-6	Aroclor 1248	ND	0.27	ug/l
11097-69-1	Aroclor 1254	ND	0.27	ug/l
11096-82-5	Aroclor 1260	ND	0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	107%		32-149%
877-09-8	Tetrachloro-m-xylene	117%		32-149%
2051-24-3	Decachlorobiphenyl	122%		30-150%

117%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 1 of 1

Page 1 of 1

Client Sample ID: 1117645UF

Lab Sample ID:M81183-6Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
A	. 10	4.0	/1	1	02/11/00	02/12/00 544	gyvo.45 so4op 1	gyyo 4 5 go 4 0 4 3
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	20.3	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117649 Lab Sample ID: M81183-7

 Lab Sample ID:
 M81183-7
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33207.D 1 03/19/09 RT n/a n/a MSN1227

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1117649

Lab Sample ID: M81183-7 **Date Sampled:** 03/10/09 Matrix: **Date Received:** 03/10/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	2.3	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts

1868-53-7 Dibromofluoromethane 104% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



C

Report of Analysis

Client Sample ID: 1117649

 Lab Sample ID:
 M81183-7
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



of Analysis Page 1 of 1

Client Sample ID: 1117649 Lab Sample ID: M81183-7

 Lab Sample ID:
 M81183-7
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25817A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume Run #1 940 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.226 0.085 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 78% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Report of Analysis

Client Sample ID: 1117649 Lab Sample ID: M81183-7

Date Sampled: 03/10/09 Matrix: AQ - Ground Water **Date Received:** 03/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15065.D 1 03/13/09 SL03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 940 ml 5.0 ml

Run #2

2051-24-3

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l
11104-28-2	Aroclor 1221	ND	0.27	ug/l
11141-16-5	Aroclor 1232	ND	0.27	ug/l
53469-21-9	Aroclor 1242	ND	0.27	ug/l
12672-29-6	Aroclor 1248	ND	0.27	ug/l
11097-69-1	Aroclor 1254	ND	0.27	ug/l
11096-82-5	Aroclor 1260	ND	0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	106%		32-149%
877-09-8	Tetrachloro-m-xylene	115%		32-149%
2051-24-3	Decachlorobiphenyl	110%		30-150%

85%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1117649UF

Lab Sample ID:M81183-8Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.7	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	10.7	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117650 Lab Sample ID: M81183-9

 Lab Sample ID:
 M81183-9
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33208.D 1 03/19/09 RT n/a n/a MSN1227

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

Compound	Result	RL	Units	Q
Acetone	ND	5.0	ug/l	
Acrylonitrile	ND	25	ug/l	
Benzene	ND	0.50	ug/l	
Bromobenzene	ND	5.0	ug/l	
Bromodichloromethane	ND	1.0	ug/l	
Bromoform	ND	1.0	ug/l	
Bromomethane	ND	2.0	ug/l	
2-Butanone (MEK)	ND	5.0	ug/l	
n-Butylbenzene	ND	5.0	ug/l	
sec-Butylbenzene	ND	5.0	ug/l	
tert-Butylbenzene	ND	5.0	ug/l	
Carbon disulfide	ND	5.0	ug/l	
Carbon tetrachloride	ND	1.0	ug/l	
Chlorobenzene	ND	1.0	ug/l	
Chloroethane	ND	2.0	ug/l	
Chloroform	ND	1.0	ug/l	
Chloromethane	ND	2.0	ug/l	
o-Chlorotoluene	ND	5.0	ug/l	
p-Chlorotoluene	ND	5.0	ug/l	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
Dibromochloromethane	ND	1.0	ug/l	
1,2-Dibromoethane	ND	2.0	ug/l	
1,2-Dichlorobenzene	ND	1.0	ug/l	
1,3-Dichlorobenzene	ND	1.0	ug/l	
1,4-Dichlorobenzene	ND	1.0	ug/l	
Dichlorodifluoromethane	ND	2.0	ug/l	
1,1-Dichloroethane	ND	1.0	ug/l	
	ND	1.0	ug/l	
1,1-Dichloroethene	ND	1.0	ug/l	
cis-1,2-Dichloroethene	ND	1.0	ug/l	
trans-1,2-Dichloroethene	ND	1.0	ug/l	
1,2-Dichloropropane	ND	2.0	ug/l	
	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane 2-Butanone (MEK) n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotehane Chlorotoluene p-Chlorotoluene p-Chlorotoluene 1,2-Dibromo-3-chloropropane Dibromochloromethane 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorotehane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromodichloromethane Bromoform ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Carbutanone (MEK) ND N-Butylbenzene ND Sec-Butylbenzene ND Carbon disulfide ND Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotenane ND Chloroform ND Chloromethane ND 0-Chlorotoluene ND 1,2-Dibromo-3-chloropropane Dibromochloromethane ND 1,2-Dichlorobenzene ND 1,3-Dichlorobenzene ND 1,4-Dichlorobenzene ND 1,4-Dichlorotenane ND 1,1-Dichloroethane ND 1,1-Dichloroethene ND trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Benzene ND Bromobenzene ND Bromodichloromethane ND Bromoform ND Bromomethane ND 2.0 2-Butanone (MEK) ND ND S.0 N-Butylbenzene ND S.0 sec-Butylbenzene ND S.0 Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotoromethane ND Chlorotoromethane ND	Acctone ND 5.0 ug/l Acrylonitrile ND 25 ug/l Benzene ND 0.50 ug/l Bromobenzene ND 5.0 ug/l Bromodichloromethane ND 1.0 ug/l Bromoform ND 1.0 ug/l 2-Butanone (MEK) ND 1.0 ug/l n-Butylbenzene ND 5.0 ug/l sec-Butylbenzene ND 5.0 ug/l sec-Butylbenzene ND 5.0 ug/l Carbon disulfide ND 5.0 ug/l Carbon disulfide ND 1.0 ug/l Chlorob

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1117650

 Lab Sample ID:
 M81183-9
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	1.1	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	,

1868-53-7 Dibromofluoromethane 104% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

 $N = \ Indicates \ presumptive \ evidence \ of \ a \ compound$



C

Report of Analysis

Client Sample ID: 1117650

 Lab Sample ID:
 M81183-9
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Page 1 of 1

Report of Analysis

Client Sample ID: 1117650

Lab Sample ID: M81183-9 **Date Sampled:** 03/10/09 Matrix: AQ - Ground Water **Date Received:** 03/10/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25818A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.824 0.086 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 79% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Report of Analysis

Report of Analys.

 Client Sample ID:
 1117650

 Lab Sample ID:
 M81183-9
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15067.D 1 03/13/09 SL 03/11/09 OP18048 GBE1057

Run #2

Run #1 930 ml Final Volume 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND ND ND ND ND ND ND ND ND	0.27	ug/l
11104-28-2	Aroclor 1221		0.27	ug/l
11141-16-5	Aroclor 1232		0.27	ug/l
53469-21-9	Aroclor 1242		0.27	ug/l
12672-29-6	Aroclor 1248		0.27	ug/l
11097-69-1	Aroclor 1254		0.27	ug/l
11096-82-5	Aroclor 1260		0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		32-149%
877-09-8	Tetrachloro-m-xylene	111%		32-149%
2051-24-3	Decachlorobiphenyl	94%		30-150%
2051-24-3	Decachlorobiphenyl	85%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1117650UF

Lab Sample ID:M81183-10Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
A =========	. 10	4.0	/1	1	03/11/09	02/12/00 EAT	grand color 1	gryn 4 c 2010 4 3
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117651

 Lab Sample ID:
 M81183-11
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33188.D 1 03/18/09 RT n/a n/a MSN1226

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 2 of 3

Client Sample ID: 1117651

 Lab Sample ID:
 M81183-11
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1, 1, 1, 2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s

100%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1117651

 Lab Sample ID:
 M81183-11
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	105%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



C.

Page 1 of 1

Client Sample ID: 1117651

Lab Sample ID: M81183-11 **Date Sampled:** 03/10/09 **Matrix:** AQ - Ground Water **Date Received:** 03/10/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25819A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume Run #1 920 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.087 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 89% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1117651

 Lab Sample ID:
 M81183-11
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15068.D 1 03/13/09 SL 03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 940 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l	
11104-28-2	Aroclor 1221	ND	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.27	ug/l	
53469-21-9	Aroclor 1242	ND	0.27	ug/l	
12672-29-6	Aroclor 1248	ND	0.27	ug/l	
11097-69-1	Aroclor 1254	ND	0.27	ug/l	
11096-82-5	Aroclor 1260	ND	0.27	ug/l	
37324-23-5	Aroclor 1262	ND	0.27	ug/l	
11100-14-4	Aroclor 1268	ND	0.27	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
877-09-8	Tetrachloro-m-xylene	109%		32-1	49%
877-09-8	Tetrachloro-m-xylene	114%		32-1	49%
2051-24-3	Decachlorobiphenyl	119%		30-1:	50%
2051-24-3	Decachlorobiphenyl	118%		30-1:	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1117651UF

Lab Sample ID:M81183-12Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
A =========	. 10	4.0	/1	1	03/11/09	02/12/00 EAT	grand color 1	gryn 4 c 2010 4 3
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Page 1 of 3

Client Sample ID: 1117663

 Lab Sample ID:
 M81183-13
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88874.D 1 03/19/09 EL n/a n/a MSG3590

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1117663

Lab Sample ID: M81183-13 **Date Sampled:** 03/10/09 Matrix: **Date Received:** 03/10/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 103% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 3 of 3

Client Sample ID: 1117663

 Lab Sample ID:
 M81183-13
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	113%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Client Sample ID: 1117663

 Lab Sample ID:
 M81183-13
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25820A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume

Run #1 900 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.089 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 75% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1117663

Lab Sample ID: M81183-13 **Date Sampled:** 03/10/09 Matrix: AQ - Ground Water **Date Received:** 03/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15069.D 1 03/13/09 SL03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 890 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254	ND ND ND ND ND	0.28 0.28 0.28 0.28 0.28 0.28	ug/l ug/l ug/l ug/l ug/l ug/l
11096-82-5 37324-23-5 11100-14-4	Aroclor 1260 Aroclor 1262 Aroclor 1268 Surrogate Recoveries	ND ND ND Run# 1	0.28 0.28 0.28 Run# 2	ug/l ug/l ug/l
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	102% 111% 91% 80%	Kuli# 2	32-149% 32-149% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1117663UF

Lab Sample ID:M81183-14Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
A =========	. 10	4.0	/1	1	03/11/09	02/12/00 EAT	grand color 1	gryn 4 c 2010 4 3
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117662

 Lab Sample ID:
 M81183-15
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88875.D 1 03/19/09 EL n/a n/a MSG3590

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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 Lab Sample ID:
 M81183-15
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

102%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1117662

 Lab Sample ID:
 M81183-15
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	115%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$

N = Indicates presumptive evidence of a compound



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Page 1 of 3

Client Sample ID: 1117646

 Lab Sample ID:
 M81183-16
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88876.D 1 03/19/09 EL n/a n/a MSG3590

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1117646

Lab Sample ID: M81183-16 **Date Sampled:** 03/10/09 Matrix: **Date Received:** 03/10/09 AQ - Ground Water Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts

105%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ N = Indicates presumptive evidence of a compound



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Client Sample ID: 1117646

 Lab Sample ID:
 M81183-16
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	114%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$

N = Indicates presumptive evidence of a compound



c

Client Sample ID: 1117646

Lab Sample ID: M81183-16 **Date Sampled:** 03/10/09 AQ - Ground Water Matrix: **Date Received:** 03/10/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25822A.D 1 03/17/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume

Run #1 880 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.091 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 101% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Page 1 of 1

Report of Analysis

Client Sample ID: 1117646

Lab Sample ID: M81183-16 **Date Sampled:** 03/10/09 Matrix: AQ - Ground Water **Date Received:** 03/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15070.D 1 03/13/09 SL03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 910 ml 5.0 ml

Run #2

2051-24-3

2051-24-3

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l
11104-28-2	Aroclor 1221	ND	0.27	ug/l
11141-16-5	Aroclor 1232	ND	0.27	ug/l
53469-21-9	Aroclor 1242	ND	0.27	ug/l
12672-29-6	Aroclor 1248	ND	0.27	ug/l
11097-69-1	Aroclor 1254	ND	0.27	ug/l
11096-82-5	Aroclor 1260	ND	0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	109%		32-149%
877-09-8	Tetrachloro-m-xylene	115%		32-149%

124%

119%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117646UF

 Lab Sample ID:
 M81183-17
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09		4	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117647

 Lab Sample ID:
 M81183-18
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88877.D 1 03/19/09 EL n/a n/a MSG3590

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1117647

Lab Sample ID: M81183-18 **Date Sampled:** 03/10/09 Matrix: **Date Received:** 03/10/09 AQ - Ground Water Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	ts

1868-53-7 Dibromofluoromethane 102% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1117647

 Lab Sample ID:
 M81183-18
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	114%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1117647

 Lab Sample ID:
 M81183-18
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25823A.D 1 03/18/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume

Run #1 840 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.095 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 84% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117647

Lab Sample ID: M81183-18 **Date Sampled:** 03/10/09 Matrix: AQ - Ground Water **Date Received:** 03/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15071.D 1 03/13/09 SL03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 940 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l
11104-28-2	Aroclor 1221	ND	0.27	ug/l
11141-16-5	Aroclor 1232	ND	0.27	ug/l
53469-21-9	Aroclor 1242	ND	0.27	ug/l
12672-29-6	Aroclor 1248	ND	0.27	ug/l
11097-69-1	Aroclor 1254	ND	0.27	ug/l
11096-82-5	Aroclor 1260	ND	0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		32-149%
877-09-8	Tetrachloro-m-xylene	117%		32-149%
2051-24-3	Decachlorobiphenyl	113%		30-150%
2051-24-3	Decachlorobiphenyl	110%		30-150%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117647UF

Lab Sample ID:M81183-19Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09		4	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200

Client Sample ID: 1117648

 Lab Sample ID:
 M81183-20
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N33233.D 1 03/20/09 RT n/a n/a MSN1228

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	3.5	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 2 of 3

Client Sample ID: 1117648

 Lab Sample ID:
 M81183-20
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 104% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1117648

 Lab Sample ID:
 M81183-20
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	106%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1117648

 Lab Sample ID:
 M81183-20
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25824A.D 1 03/18/09 DG 03/11/09 OP18047 GBC1422

Run #2

Initial Volume Final Volume Run #1 830 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.096 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 88% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1117648

 Lab Sample ID:
 M81183-20
 Date Sampled:
 03/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15072.D 1 03/13/09 SL 03/11/09 OP18048 GBE1057

Run #2

Initial Volume Final Volume

Run #1 920 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242	ND ND ND	0.27 0.27 0.27 0.27	ug/l ug/l ug/l ug/l
12672-29-6 11097-69-1 11096-82-5 37324-23-5 11100-14-4	Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268	ND ND ND ND ND	0.27 0.27 0.27 0.27 0.27	ug/l ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	108% 116% 107% 104%		32-149% 32-149% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Report of Analysis

Client Sample ID: 1117648UF Lab Sample ID: M81183-21

Lab Sample ID:M81183-21Date Sampled:03/10/09Matrix:AQ - Ground WaterDate Received:03/10/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
A =========	. 10	4.0	/1	1	03/11/09	02/12/00 EAT	grand color 1	gryn 4 c 2010 4 3
Arsenic	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Barium	< 200	200	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Chromium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Copper	< 25	25	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ²	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Selenium	< 10	10	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³
Zinc	< 20	20	ug/l	1	03/11/09	03/12/09 EAL	SW846 6010B ¹	SW846 3010A ³

(1) Instrument QC Batch: MA10242(2) Instrument QC Batch: MA10245(3) Prep QC Batch: MP13188(4) Prep QC Batch: MP13200



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



Parameter Certification Exceptions

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



	CUTE		044	CH	AIN	OGY CE	F (CI	JS	T	O.	D.	Y		ACCI	JTEST J	OB #:			M811	83		
₩ AL	CUTE			70.		MARLBOR 08-481-62	OUGH	, MA	0175	2					ACCI		UOTE #		-453				
	Laborato					LITY INFO			UU -1	,,-,,	~	Т		A	NALY		INFOR				ATRIX CODES		
ADDRESS Plain	EA orth West ville Robin M	Drive Of 66 STATE CKINNY	062 ZIP	PROJECT I				,				-		0.000/1/11/11	100'5					\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	DW - DRINKING WATER WATER WATER WASTE WATER SO - SOIL SL - SLUDGE DI - OIL LIQ - OTHER LIQUID SOL - OTHER		
ACCUTEST		-		CO	LLECTION		¥	ES	PR	SER	VATIO		23 1	EIFH	9						SOLID		
SAMPLE #	FIELD ID / PO	OINT OF COLLECTI	ON	DATE	TIME	SAMPLED BY:	MATRIX	₽ OF	₽ 3	HNO3	NON ESS	1 6	١ ;	7	MC148					L	AB USE ONLY		
-1	11176/3			3/10/09	14.45	-158	LW		T	\top	- 1		()										
-2	11176430	f		3/10/09					П	П		ΧĪ	\top	Х									
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M81183: Chain of Custody
Page 1 of 4



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	960-1-1-6101				LLECTION		T	es l	PR	ESE	RVATION	ON.	8.5	ETPH	20	\$							SOL - OTHER SOLID	
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M81183: Chain of Custody Page 2 of 4



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ACCUTEST QUOTE #:	1 18/187

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M81183: Chain of Custody Page 3 of 4



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M81183: Chain of Custody Page 4 of 4



Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

Laboratory Name: Accutest New England Client: Loureiro Eng. Associates

Project Location: UTC: 2009 Quarterly GW-Willow Pond **Project Number:** 88UT907

CT-ETPH, SW846 6010B, SW846 7470A, SW846 8082, SW846 8260B

Sampling Date(s): 3/10/2009

Methods:

Laboratory Sample ID(s): $M81183-1,\,M81183-2,\,M81183-3,\,M81183-4,\,M81183-5,\,M81183-6,\,M81183-7,\,M81183-8,$

M81183-9, M81183-10, M81183-11, M81183-12, M81183-13, M81183-14, M81183-15,

Yes 🗀

Yes 🔽

No 🗹

No 🗔

M81183-16, M81183-17, M81183-18, M81183-19, M81183-20, M81183-21

For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-Yes 🔽 No 🗀 1 specific Reasonable Confidence Protocol documents)? Yes 🗷 1A Where all the method specified preservation and holding time requirements met? 1B Yes 📮 No VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods) NA 🔽 Were all samples received by the laboratory in a condition consistent with Yes 🔽 2 No Γ that described on the associated chain-of-custody document(s)? Yes 🔽 Were samples received at an appropriate temperature (<6° C)? 3 Nο Were all QA/QC performance criteria specified in the CTDEP Reasonable No 🗷 Yes 🗀 4 Confidence Protocol documents achieved? a) Were reporting limits specified or referenced on the chain-of-custody? Yes 🗹 5 No ~ \Box b) Were these reporting limits met? No

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

For each analytical method referenced in this laboratory report package,

were results reported for all constituents identified in the method-specific

analyte lists presented in the Reasonable Confidence Protocol documents? Are project-specific matrix spikes and laboratory duplicates included in this

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belie
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

6

7

data set?

Signature: Position: Lab Director Printed Name: Reza Tand Date: 3/23/2009

Accutest New England



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Job No: M81183

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M81183-1 1117643	Collected: 10-MAR-09	14:45 By: CSB	Receiv	ed: 10-MAR	09 By	: ЈВ
M81183-1 M81183-1 M81183-1		13-MAR-09 06:28 17-MAR-09 17:28 17-MAR-09 19:51	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-2 1117643UF		14:45 By: CSB	Receiv	red: 10-MAR	-09 By	: ЈВ
M81183-2	SW846 6010B	12-MAR-09 12:02	EAL	11-MAR-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M81183-2	SW846 7470A	13-MAR-09 17:02	MA	13-MAR-09	MA	HG
M81183-3 1117644	Collected: 10-MAR-09	12:45 By: CSB	Receiv	ed: 10-MAR	-09 By	: ЈВ
M81183-3 M81183-3 M81183-3		13-MAR-09 07:05 17-MAR-09 18:08 17-MAR-09 20:19	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-4 1117644UF		12:45 By: CSB	Receiv	ed: 10-MAR	-09 By	:: ЈВ
M81183-4	SW846 6010B	12-MAR-09 12:59	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M81183-4	SW846 7470A	13-MAR-09 16:41	MA	13-MAR-09	MA	HG
M81183-5 1117645	Collected: 10-MAR-09	10:15 By: CSB	Receiv	ed: 10-MAR	-09 By	: JB
M81183-5 M81183-5 M81183-5		13-MAR-09 07:42 17-MAR-09 18:47 19-MAR-09 15:47	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-6 1117645UF		10:15 By: CSB	Receiv	ed: 10-MAR	-09 By	: ЈВ
M81183-6	SW846 6010B	12-MAR-09 13:04	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, S ZN



Job No:

M81183

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M81183-6	SW846 7470A	13-MAR-09 17:04	MA	13-MAR-09	MA	HG
M81183-7 1117649	Collected: 10-MAR-09	10:35 By: LC	Receiv	ed: 10-MAR	1-09 By	r: JB
M81183-7	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 08:19 17-MAR-09 19:26 19-MAR-09 16:15	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-8 1117649UF	Collected: 10-MAR-09	10:35 By: LC	Receiv	ed: 10-MAR	t-09 By	r: JB
M81183-8	SW846 6010B	12-MAR-09 13:10	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, SI ZN
M81183-8	SW846 7470A	13-MAR-09 17:07	MA	13-MAR-09	MA	HG
M81183-9 1117650	Collected: 10-MAR-09	12:35 By: LC	Receiv	ed: 10-MAR	t-09 By	r: JB
M81183-9	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 09:33 17-MAR-09 20:06 19-MAR-09 16:44	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-10 1117650UF	Collected: 10-MAR-09	12:35 By: LC	Receiv	red: 10-MAR	k-09 By	r: JB
M81183-10	SW846 6010B	12-MAR-09 13:16	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, SI ZN
M81183-10	SW846 7470A	13-MAR-09 17:10	MA	13-MAR-09	MA	HG
M81183-11 1117651	Collected: 10-MAR-09	14:00 By: LC	Receiv	ed: 10-MAR	1-09 By	r: JB
M81183-11	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 10:10 17-MAR-09 20:45 18-MAR-09 20:19	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-12 1117651UF	Collected: 10-MAR-09	14:00 By: LC	Receiv	ed: 10-MAR	1-09 By	r: JB



Job No:

M81183

Internal Sample Tracking Chronicle

Loureiro Eng. Associates

Sample Number	Method	Analyzed	Ву	Prepped	By	Test Codes
	1,1001100	- Iliuiy 200		Терреа		Test codes
M81183-12	SW846 6010B	12-MAR-09 13:40	EAL	11-MAR-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,SI
M81183-12	SW846 7470A	13-MAR-09 17:12	MA	13-MAR-09	MA	HG
M81183-13 1117663	Collected: 10-MAR-09	12:00 By: LC	Receiv	ed: 10-MAR	k-09 By	r: JB
M81183-13	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 10:48 17-MAR-09 21:24 19-MAR-09 11:52	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-14 1117663UF	Collected: 10-MAR-09	12:00 By: LC	Receiv	ed: 10-MAR	1-09 By	у: JB
M81183-14	SW846 6010B	12-MAR-09 13:46	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, SI ZN
M81183-14	SW846 7470A	13-MAR-09 17:14	MA	13-MAR-09	MA	HG
M81183-15 1117662	Collected: 10-MAR-09	12:00 By: LC	Receiv	ed: 10-MAR	k-09 By	r: JB
M81183-15	SW846 8260B	19-MAR-09 12:19	EL			V8260RCP
M81183-16 1117646	Collected: 10-MAR-09	10:45 By: NE	Receiv	ed: 10-MAR	k-09 By	r: JB
M81183-16	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 11:25 17-MAR-09 22:43 19-MAR-09 12:46	DG	11-MAR-09 11-MAR-09		P8082RCP BCTTPH V8260RCP
M81183-17 1117646UF	Collected: 10-MAR-09	10:45 By: NE	Receiv	ed: 10-MAR	k-09 By	r: JB
M81183-17	SW846 6010B	12-MAR-09 13:51	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M81183-17	SW846 7470A	13-MAR-09 17:17	MA	13-MAR-09	MA	HG
M81183-18 1117647	Collected: 10-MAR-09	12:55 By: NE	Receiv	ved: 10-MAR	t-09 By	r: JB



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M81183 Job No:

Sample						
Number	Method	Analyzed	By	Prepped	By	Test Codes
M81183-18	SW846 8082	13-MAR-09 12:02	SL	11-MAR-09	AJ	P8082RCP
M81183-18	CT-ETPH	18-MAR-09 08:30	DG	11-MAR-09) AJ	ВСТТРН
M81183-18	SW846 8260B	19-MAR-09 13:13	EL			V8260RCP
M81183-19 1117647UF	Collected: 10-MAR-09	12:55 By: NE	Receiv	ed: 10-MAR	2-09 By	7: JB
M81183-19	SW846 6010B	12-MAR-09 13:57	EAL	11-MAR-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, SI ZN
M81183-19	SW846 7470A	13-MAR-09 17:24	MA	13-MAR-09	MA	HG
M81183-20 1117648	Collected: 10-MAR-09	14:25 By: NE	Receiv	ved: 10-MAR	2-09 By	7: JB
M81183-20	SW846 8082	13-MAR-09 12:39	SL	11-MAR-09) AJ	P8082RCP
M81183-20	CT-ETPH	18-MAR-09 09:04	DG	11-MAR-09) AJ	ВСТТРН
M81183-20	SW846 8260B	20-MAR-09 13:43	RT			V8260RCP
M81183-21 1117648UF	Collected: 10-MAR-09	14:25 By: NE	Receiv	ed: 10-MAR	1-09 By	7: JB
M81183-21	SW846 6010B	12-MAR-09 14:03	EAL	11-MAR-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,S
M81183-21	SW846 7470A	13-MAR-09 17:26	MA	13-MAR-09	MA	HG





GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



Method: SW846 8260B

Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1225-MB	N33143.D	1	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

M81183-1, M81183-3

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method: SW846 8260B

Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1225-MB	N33143.D	1	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

M81183-1, M81183-3

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



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Method: SW846 8260B

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Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample MSN1225-MB	File ID N33143.D	DF 1	Analyzed 03/17/09	By RT	Prep Date n/a	Prep Batch n/a	Analytical Batch MSN1225

The QC reported here applies to the following samples:

M81183-1, M81183-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	100%	79-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	105%	80-120%



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Method: SW846 8260B

Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1226-MB	N33177.D	1	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

M81183-11

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method Blank Summary Job Number: M81183

LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample F	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1226-MB	N33177.D	1	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample MSN1226-MB	File ID N33177.D	DF 1	Analyzed 03/18/09	By RT	Prep Date n/a	Prep Batch n/a	Analytical Batch MSN1226

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	103%	79-130%
2037-26-5	Toluene-D8	98%	80-120%
460-00-4	4-Bromofluorobenzene	103%	80-120%



Method Blank Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3590-MB	G88873.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method Blank Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3590-MB	G88873.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



Method Blank Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample MSG3590-MB	File ID G88873.D	DF 1	Analyzed 03/19/09	By EL	Prep Date n/a	Prep Batch n/a	Analytical Batch MSG3590

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	101%	79-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	110%	80-120%



Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1227-MB	N33205.D	1	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1227-MB	N33205.D	1	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



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Method Blank Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch	
MSN1227-MB	N33205.D	1	03/19/09	RT	n/a	n/a	MSN1227	

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	102%	79-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	105%	80-120%



Method Blank Summary Job Number: M81183

LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1228-MB	N33232.D	1	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1228-MB	N33232.D	1	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



Method Blank Summary Job Number: M81183

LEA Loureiro Eng. Associates **Account:**

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1228-MB	N33232.D	1	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	104%	79-130%
2037-26-5	Toluene-D8	99%	80-120%
460-00-4	4-Bromofluorobenzene	106%	80-120%



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1225-BS	N33140.D	1	03/17/09	RT	n/a	n/a	MSN1225
MSN1225-BSD	N33141.D	1	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	48.4	97	53.6	107	10	30-150/25
107-13-1	Acrylonitrile	250	228	91	265	106	15	60-145/25
71-43-2	Benzene	50	55.0	110	58.6	117	6	78-120/25
108-86-1	Bromobenzene	50	51.3	103	55.7	111	8	76-120/25
75-27-4	Bromodichloromethane	50	57.6	115	61.8	124	7	70-137/25
75-25-2	Bromoform	50	43.7	87	48.0	96	9	66-136/25
74-83-9	Bromomethane	50	53.1	106	59.4	119	11	50-143/25
78-93-3	2-Butanone (MEK)	50	45.1	90	51.6	103	13	53-150/25
104-51-8	n-Butylbenzene	50	53.0	106	57.6	115	8	70-141/25
135-98-8	sec-Butylbenzene	50	56.9	114	61.5	123	8	74-130/25
98-06-6	tert-Butylbenzene	50	57.1	114	61.9	124	8	73-134/25
75-15-0	Carbon disulfide	50	59.7	119	65.1	130	9	56-147/25
56-23-5	Carbon tetrachloride	50	58.3	117	62.7	125	7	64-151/25
108-90-7	Chlorobenzene	50	51.7	103	56.0	112	8	75-120/25
75-00-3	Chloroethane	50	53.7	107	57.8	116	7	50-160/25
67-66-3	Chloroform	50	53.7	107	58.6	117	9	73-130/25
74-87-3	Chloromethane	50	44.0	88	47.7	95	8	40-150/25
95-49-8	o-Chlorotoluene	50	54.3	109	59.1	118	8	75-125/25
106-43-4	p-Chlorotoluene	50	53.9	108	58.0	116	7	73-127/25
96-12-8	1,2-Dibromo-3-chloropropane	50	43.0	86	47.4	95	10	53-149/25
124-48-1	Dibromochloromethane	50	54.7	109	60.5	121	10	77-130/25
106-93-4	1,2-Dibromoethane	50	48.3	97	53.4	107	10	70-134/25
95-50-1	1,2-Dichlorobenzene	50	50.3	101	54.4	109	8	76-122/25
541-73-1	1,3-Dichlorobenzene	50	50.9	102	54.9	110	8	73-124/25
106-46-7	1,4-Dichlorobenzene	50	49.8	100	53.7	107	8	73-123/25
75-71-8	Dichlorodifluoromethane	50	54.0	108	58.4	117	8	10-150/25
75-34-3	1,1-Dichloroethane	50	53.8	108	58.6	117	9	71-130/25
107-06-2	1,2-Dichloroethane	50	50.8	102	55.3	111	8	63-145/25
75-35-4	1,1-Dichloroethene	50	57.1	114	61.9	124	8	70-128/25
156-59-2	cis-1,2-Dichloroethene	50	54.1	108	59.2	118	9	70-123/25
156-60-5	trans-1,2-Dichloroethene	50	56.2	112	61.5	123	9	70-126/25
78-87-5	1,2-Dichloropropane	50	53.0	106	57.0	114	7	76-124/25
142-28-9	1,3-Dichloropropane	50	49.2	98	54.3	109	10	79-123/25
594-20-7	2,2-Dichloropropane	50	52.7	105	56.3	113	7	30-150/25
563-58-6	1,1-Dichloropropene	50	55.8	112	58.6	117	5	76-128/25
10061-01-5	cis-1,3-Dichloropropene	50	49.6	99	53.8	108	8	70-138/25



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1225-BS	N33140.D	1	03/17/09	RT	n/a	n/a	MSN1225
MSN1225-BSD	N33141.D	1	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	47.6	95	51.9	104	9	61-140/25
100-41-4	Ethylbenzene	50	54.2	108	57.9	116	7	79-123/25
76-13-1	Freon 113	50	62.3	125	67.3	135	8	66-141/25
87-68-3	Hexachlorobutadiene	50	53.5	107	57.1	114	7	60-148/25
591-78-6	2-Hexanone	50	42.8	86	48.0	96	11	52-146/25
98-82-8	Isopropylbenzene	50	58.0	116	62.3	125	7	75-128/25
99-87-6	p-Isopropyltoluene	50	55.1	110	59.0	118	7	73-130/25
1634-04-4	Methyl Tert Butyl Ether	50	50.3	101	56.5	113	12	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	44.2	88	51.1	102	14	60-145/25
74-95-3	Methylene bromide	50	48.1	96	53.5	107	11	76-127/25
75-09-2	Methylene chloride	50	55.2	110	60.6	121	9	70-130/25
91-20-3	Naphthalene	50	46.9	94	52.6	105	11	62-140/25
103-65-1	n-Propylbenzene	50	57.4	115	62.0	124	8	73-130/25
100-42-5	Styrene	50	54.9	110	59.3	119	8	70-129/25
630-20-6	1,1,1,2-Tetrachloroethane	50	53.4	107	57.0	114	7	81-126/25
79-34-5	1,1,2,2-Tetrachloroethane	50	47.7	95	53.3	107	11	63-142/25
127-18-4	Tetrachloroethene	50	52.8	106	56.3	113	6	70-130/25
109-99-9	Tetrahydrofuran	50	42.5	85	49.1	98	14	50-147/25
108-88-3	Toluene	50	53.7	107	57.4	115	7	77-121/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	45.4	91	50.9	102	11	30-150/25
87-61-6	1,2,3-Trichlorobenzene	50	49.6	99	54.0	108	8	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	49.4	99	54.3	109	9	64-136/25
71-55-6	1,1,1-Trichloroethane	50	57.3	115	62.4	125	9	70-142/25
79-00-5	1,1,2-Trichloroethane	50	51.7	103	56.5	113	9	79-123/25
79-01-6	Trichloroethene	50	56.1	112	60.4	121	7	72-128/25
75-69-4	Trichlorofluoromethane	50	53.0	106	58.2	116	9	54-151/25
96-18-4	1,2,3-Trichloropropane	50	47.1	94	53.7	107	13	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	56.1	112	60.4	121	7	73-130/25
108-67-8	1,3,5-Trimethylbenzene	50	55.3	111	59.9	120	8	73-130/25
75-01-4	Vinyl chloride	50	57.1	114	61.6	123	8	45-150/25
	m,p-Xylene	100	108	108	117	117	8	74-127/25
95-47-6	o-Xylene	50	53.3	107	57.5	115	8	79-125/25



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Method: SW846 8260B

50000

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Blank Spike/Blank Spike Duplicate Summary

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1225-BS	N33140.D	1	03/17/09	RT	n/a	n/a	MSN1225
MSN1225-BSD	N33141.D	1	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	103%	79-130%
2037-26-5	Toluene-D8	100%	100%	80-120%
460-00-4	4-Bromofluorobenzene	101%	102%	80-120%



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1226-BS	N33174.D	1	03/18/09	RT	n/a	n/a	MSN1226
MSN1226-BSD	N33175.D	1	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	49.3	99	44.6	89	10	30-150/25
107-13-1	Acrylonitrile	250	235	94	212	85	10	60-145/25
71-43-2	Benzene	50	54.9	110	48.9	98	12	78-120/25
108-86-1	Bromobenzene	50	51.6	103	45.6	91	12	76-120/25
75-27-4	Bromodichloromethane	50	58.2	116	51.4	103	12	70-137/25
75-25-2	Bromoform	50	45.0	90	41.3	83	9	66-136/25
74-83-9	Bromomethane	50	53.5	107	47.6	95	12	50-143/25
78-93-3	2-Butanone (MEK)	50	48.3	97	38.9	78	22	53-150/25
104-51-8	n-Butylbenzene	50	52.4	105	46.4	93	12	70-141/25
135-98-8	sec-Butylbenzene	50	56.0	112	49.6	99	12	74-130/25
98-06-6	tert-Butylbenzene	50	57.4	115	50.5	101	13	73-134/25
75-15-0	Carbon disulfide	50	59.0	118	52.6	105	11	56-147/25
56-23-5	Carbon tetrachloride	50	57.8	116	51.2	102	12	64-151/25
108-90-7	Chlorobenzene	50	52.5	105	46.9	94	11	75-120/25
75-00-3	Chloroethane	50	53.1	106	47.5	95	11	50-160/25
67-66-3	Chloroform	50	54.6	109	48.4	97	12	73-130/25
74-87-3	Chloromethane	50	46.7	93	39.8	80	16	40-150/25
95-49-8	o-Chlorotoluene	50	54.7	109	48.5	97	12	75-125/25
106-43-4	p-Chlorotoluene	50	54.2	108	47.5	95	13	73-127/25
96-12-8	1,2-Dibromo-3-chloropropane	50	44.0	88	38.9	78	12	53-149/25
124-48-1	Dibromochloromethane	50	55.9	112	50.4	101	10	77-130/25
106-93-4	1,2-Dibromoethane	50	49.5	99	44.8	90	10	70-134/25
95-50-1	1,2-Dichlorobenzene	50	51.0	102	45.2	90	12	76-122/25
541-73-1	1,3-Dichlorobenzene	50	51.1	102	45.3	91	12	73-124/25
106-46-7	1,4-Dichlorobenzene	50	50.3	101	44.7	89	12	73-123/25
75-71-8	Dichlorodifluoromethane	50	52.1	104	45.3	91	14	10-150/25
75-34-3	1,1-Dichloroethane	50	54.1	108	47.8	96	12	71-130/25
107-06-2	1,2-Dichloroethane	50	51.3	103	46.0	92	11	63-145/25
75-35-4	1,1-Dichloroethene	50	55.8	112	49.4	99	12	70-128/25
156-59-2	cis-1,2-Dichloroethene	50	54.9	110	48.4	97	13	70-123/25
156-60-5	trans-1,2-Dichloroethene	50	56.2	112	50.1	100	11	70-126/25
78-87-5	1,2-Dichloropropane	50	53.3	107	47.6	95	11	76-124/25
142-28-9	1,3-Dichloropropane	50	50.3	101	45.4	91	10	79-123/25
594-20-7	2,2-Dichloropropane	50	52.3	105	46.1	92	13	30-150/25
563-58-6	1,1-Dichloropropene	50	54.8	110	48.3	97	13	76-128/25
10061-01-5	cis-1,3-Dichloropropene	50	50.0	100	44.3	89	12	70-138/25



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1226-BS	N33174.D	1	03/18/09	RT	n/a	n/a	MSN1226
MSN1226-BSD	N33175.D	1	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	48.2	96	42.9	86	12	61-140/25
100-41-4	Ethylbenzene	50	54.0	108	48.4	97	11	79-123/25
76-13-1	Freon 113	50	60.9	122	53.9	108	12	66-141/25
87-68-3	Hexachlorobutadiene	50	53.7	107	46.4	93	15	60-148/25
591-78-6	2-Hexanone	50	45.9	92	38.2	76	18	52-146/25
98-82-8	Isopropylbenzene	50	58.2	116	51.0	102	13	75-128/25
99-87-6	p-Isopropyltoluene	50	54.6	109	48.3	97	12	73-130/25
1634-04-4	Methyl Tert Butyl Ether	50	51.3	103	46.8	94	9	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	45.6	91	41.0	82	11	60-145/25
74-95-3	Methylene bromide	50	49.8	100	44.8	90	11	76-127/25
75-09-2	Methylene chloride	50	56.2	112	49.8	100	12	70-130/25
91-20-3	Naphthalene	50	48.2	96	42.8	86	12	62-140/25
103-65-1	n-Propylbenzene	50	57.5	115	50.4	101	13	73-130/25
100-42-5	Styrene	50	55.5	111	49.8	100	11	70-129/25
630-20-6	1,1,1,2-Tetrachloroethane	50	54.1	108	48.5	97	11	81-126/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.3	97	43.0	86	12	63-142/25
127-18-4	Tetrachloroethene	50	52.4	105	46.6	93	12	70-130/25
109-99-9	Tetrahydrofuran	50	44.4	89	39.7	79	11	50-147/25
108-88-3	Toluene	50	54.1	108	47.8	96	12	77-121/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	47.0	94	43.2	86	8	30-150/25
87-61-6	1,2,3-Trichlorobenzene	50	50.4	101	44.3	89	13	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	50.7	101	44.5	89	13	64-136/25
71-55-6	1,1,1-Trichloroethane	50	57.7	115	51.0	102	12	70-142/25
79-00-5	1,1,2-Trichloroethane	50	51.8	104	47.1	94	10	79-123/25
79-01-6	Trichloroethene	50	55.6	111	49.7	99	11	72-128/25
75-69-4	Trichlorofluoromethane	50	52.8	106	46.6	93	12	54-151/25
96-18-4	1,2,3-Trichloropropane	50	48.5	97	43.5	87	11	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	55.9	112	49.6	99	12	73-130/25
108-67-8	1,3,5-Trimethylbenzene	50	55.5	111	48.9	98	13	73-130/25
75-01-4	Vinyl chloride	50	54.4	109	46.9	94	15	45-150/25
	m,p-Xylene	100	110	110	98.0	98	12	74-127/25
95-47-6	o-Xylene	50	54.3	109	48.1	96	12	79-125/25



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1226-BS	N33174.D	1	03/18/09	RT	n/a	n/a	MSN1226
MSN1226-BSD	N33175.D	1	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	102%	101%	79-130%
2037-26-5	Toluene-D8	100%	100%	80-120%
460-00-4	4-Bromofluorobenzene	101%	100%	80-120%



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3590-BS	G88870A.D	1	03/19/09	EL	n/a	n/a	MSG3590
MSG3590-BSD	G88871.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	52.4	105	42.9	86	20	30-150/25
107-13-1	Acrylonitrile	250	257	103	254	102	1	60-145/25
71-43-2	Benzene	50	46.5	93	46.3	93	0	78-120/25
108-86-1	Bromobenzene	50	48.9	98	47.5	95	3	76-120/25
75-27-4	Bromodichloromethane	50	53.0	106	52.1	104	2	70-137/25
75-25-2	Bromoform	50	50.3	101	50.0	100	1	66-136/25
74-83-9	Bromomethane	50	45.0	90	44.8	90	0	50-143/25
78-93-3	2-Butanone (MEK)	50	51.2	102	45.4	91	12	53-150/25
104-51-8	n-Butylbenzene	50	51.4	103	50.8	102	1	70-141/25
135-98-8	sec-Butylbenzene	50	49.4	99	49.1	98	1	74-130/25
98-06-6	tert-Butylbenzene	50	48.5	97	47.8	96	1	73-134/25
75-15-0	Carbon disulfide	50	49.9	100	49.5	99	1	56-147/25
56-23-5	Carbon tetrachloride	50	51.1	102	51.0	102	0	64-151/25
108-90-7	Chlorobenzene	50	47.0	94	46.7	93	1	75-120/25
75-00-3	Chloroethane	50	45.7	91	46.0	92	1	50-160/25
67-66-3	Chloroform	50	47.4	95	46.4	93	2	73-130/25
74-87-3	Chloromethane	50	51.8	104	50.7	101	2	40-150/25
95-49-8	o-Chlorotoluene	50	47.8	96	46.6	93	3	75-125/25
106-43-4	p-Chlorotoluene	50	48.7	97	47.7	95	2	73-127/25
96-12-8	1,2-Dibromo-3-chloropropane	50	42.7	85	43.7	87	2	53-149/25
124-48-1	Dibromochloromethane	50	52.1	104	51.5	103	1	77-130/25
106-93-4	1,2-Dibromoethane	50	48.9	98	48.6	97	1	70-134/25
95-50-1	1,2-Dichlorobenzene	50	49.3	99	49.0	98	1	76-122/25
541-73-1	1,3-Dichlorobenzene	50	49.3	99	48.9	98	1	73-124/25
106-46-7	1,4-Dichlorobenzene	50	48.2	96	47.7	95	1	73-123/25
75-71-8	Dichlorodifluoromethane	50	58.1	116	58.3	117	0	10-150/25
75-34-3	1,1-Dichloroethane	50	47.6	95	46.8	94	2	71-130/25
107-06-2	1,2-Dichloroethane	50	50.6	101	49.8	100	2	63-145/25
75-35-4	1,1-Dichloroethene	50	47.0	94	46.4	93	1	70-128/25
156-59-2	cis-1,2-Dichloroethene	50	46.2	92	45.2	90	2	70-123/25
156-60-5	trans-1,2-Dichloroethene	50	48.3	97	47.4	95	2	70-126/25
78-87-5	1,2-Dichloropropane	50	49.0	98	47.7	95	3	76-124/25
142-28-9	1,3-Dichloropropane	50	47.9	96	47.4	95	1	79-123/25
594-20-7	2,2-Dichloropropane	50	50.9	102	50.5	101	1	30-150/25
563-58-6	1,1-Dichloropropene	50	48.9	98	48.9	98	0	76-128/25
10061-01-5	cis-1,3-Dichloropropene	50	49.0	98	48.1	96	2	70-138/25



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3590-BS	G88870A.D	1	03/19/09	EL	n/a	n/a	MSG3590
MSG3590-BSD	G88871.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	50.4	101	49.6	99	2	61-140/25
100-41-4	Ethylbenzene	50	48.1	96	47.8	96	1	79-123/25
76-13-1	Freon 113	50	51.3	103	51.0	102	1	66-141/25
87-68-3	Hexachlorobutadiene	50	47.8	96	47.2	94	1	60-148/25
591-78-6	2-Hexanone	50	51.9	104	46.2	92	12	52-146/25
98-82-8	Isopropylbenzene	50	49.5	99	49.0	98	1	75-128/25
99-87-6	p-Isopropyltoluene	50	49.9	100	49.7	99	0	73-130/25
1634-04-4	Methyl Tert Butyl Ether	50	48.6	97	47.7	95	2	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	53.1	106	52.5	105	1	60-145/25
74-95-3	Methylene bromide	50	48.3	97	47.5	95	2	76-127/25
75-09-2	Methylene chloride	50	49.6	99	48.7	97	2	70-130/25
91-20-3	Naphthalene	50	47.7	95	45.6	91	5	62-140/25
103-65-1	n-Propylbenzene	50	50.4	101	49.6	99	2	73-130/25
100-42-5	Styrene	50	49.4	99	49.5	99	0	70-129/25
630-20-6	1,1,1,2-Tetrachloroethane	50	48.8	98	48.8	98	0	81-126/25
79-34-5	1,1,2,2-Tetrachloroethane	50	46.4	93	45.9	92	1	63-142/25
127-18-4	Tetrachloroethene	50	48.1	96	48.2	96	0	70-130/25
109-99-9	Tetrahydrofuran	50	49.4	99	48.7	97	1	50-147/25
108-88-3	Toluene	50	48.0	96	47.7	95	1	77-121/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	41.5	83	41.5	83	0	30-150/25
87-61-6	1,2,3-Trichlorobenzene	50	41.5	83	40.1	80	3	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	45.3	91	44.0	88	3	64-136/25
71-55-6	1,1,1-Trichloroethane	50	48.7	97	48.5	97	0	70-142/25
79-00-5	1,1,2-Trichloroethane	50	49.1	98	48.2	96	2	79-123/25
79-01-6	Trichloroethene	50	49.1	98	48.8	98	1	72-128/25
75-69-4	Trichlorofluoromethane	50	46.1	92	45.8	92	1	54-151/25
96-18-4	1,2,3-Trichloropropane	50	48.5	97	47.9	96	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	51.2	102	50.6	101	1	73-130/25
108-67-8	1,3,5-Trimethylbenzene	50	49.9	100	49.4	99	1	73-130/25
75-01-4	Vinyl chloride	50	56.7	113	56.9	114	0	45-150/25
	m,p-Xylene	100	96.9	97	96.8	97	0	74-127/25
95-47-6	o-Xylene	50	48.0	96	48.4	97	1	79-125/25



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary Job Number: M81183

LEA Loureiro Eng. Associates UTC: 2009 Quarterly GW-Willow Pond **Project:**

Account:

Sample MSG3590-BS MSG3590-BSD	File ID G88870A.D G88871.D	DF 1	Analyzed 03/19/09 03/19/09	By EL EL	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch MSG3590 MSG3590
MSG3590-BSD	G88871.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	Dibromofluoromethane Toluene-D8	102% 101%	101% 101%	79-130% 80-120%
	4-Bromofluorobenzene	99%	97%	80-120% 80-120%



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1227-BS	N33202.D	1	03/19/09	RT	n/a	n/a	MSN1227
MSN1227-BSD	N33203.D	1	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	51.9	104	45.8	92	12	30-150/25
107-13-1	Acrylonitrile	250	227	91	225	90	1	60-145/25
71-43-2	Benzene	50	50.9	102	49.2	98	3	78-120/25
108-86-1	Bromobenzene	50	46.9	94	46.0	92	2	76-120/25
75-27-4	Bromodichloromethane	50	53.8	108	52.3	105	3	70-137/25
75-25-2	Bromoform	50	42.3	85	40.9	82	3	66-136/25
74-83-9	Bromomethane	50	48.5	97	45.6	91	6	50-143/25
78-93-3	2-Butanone (MEK)	50	46.7	93	43.4	87	7	53-150/25
104-51-8	n-Butylbenzene	50	49.7	99	47.7	95	4	70-141/25
135-98-8	sec-Butylbenzene	50	52.7	105	50.7	101	4	74-130/25
98-06-6	tert-Butylbenzene	50	53.0	106	51.0	102	4	73-134/25
75-15-0	Carbon disulfide	50	55.0	110	53.6	107	3	56-147/25
56-23-5	Carbon tetrachloride	50	54.0	108	52.6	105	3	64-151/25
108-90-7	Chlorobenzene	50	48.0	96	46.7	93	3	75-120/25
75-00-3	Chloroethane	50	49.6	99	47.5	95	4	50-160/25
67-66-3	Chloroform	50	49.8	100	49.0	98	2	73-130/25
74-87-3	Chloromethane	50	41.3	83	40.1	80	3	40-150/25
95-49-8	o-Chlorotoluene	50	50.6	101	48.8	98	4	75-125/25
106-43-4	p-Chlorotoluene	50	49.7	99	48.4	97	3	73-127/25
96-12-8	1,2-Dibromo-3-chloropropane	50	42.7	85	40.6	81	5	53-149/25
124-48-1	Dibromochloromethane	50	51.7	103	50.8	102	2	77-130/25
106-93-4	1,2-Dibromoethane	50	45.9	92	45.1	90	2	70-134/25
95-50-1	1,2-Dichlorobenzene	50	46.1	92	45.3	91	2	76-122/25
541-73-1	1,3-Dichlorobenzene	50	46.9	94	45.2	90	4	73-124/25
106-46-7	1,4-Dichlorobenzene	50	45.9	92	45.0	90	2	73-123/25
75-71-8	Dichlorodifluoromethane	50	47.0	94	46.0	92	2	10-150/25
75-34-3	1,1-Dichloroethane	50	49.7	99	49.3	99	1	71-130/25
107-06-2	1,2-Dichloroethane	50	47.5	95	46.7	93	2	63-145/25
75-35-4	1,1-Dichloroethene	50	51.4	103	50.1	100	3	70-128/25
156-59-2	cis-1,2-Dichloroethene	50	49.5	99	48.9	98	1	70-123/25
156-60-5	trans-1,2-Dichloroethene	50	51.9	104	50.2	100	3	70-126/25
78-87-5	1,2-Dichloropropane	50	49.7	99	48.2	96	3	76-124/25
142-28-9	1,3-Dichloropropane	50	47.3	95	45.7	91	3	79-123/25
594-20-7	2,2-Dichloropropane	50	48.3	97	47.2	94	2	30-150/25
563-58-6	1,1-Dichloropropene	50	51.1	102	49.6	99	3	76-128/25
10061-01-5	cis-1,3-Dichloropropene	50	46.2	92	45.1	90	2	70-138/25



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSN1227-BS	N33202.D	1	03/19/09	RT	n/a	n/a	MSN1227
MSN1227-BSD	N33203.D	1	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	45.1	90	44.0	88	2	61-140/25
100-41-4	Ethylbenzene	50	50.2	100	48.2	96	4	79-123/25
76-13-1	Freon 113	50	56.7	113	55.3	111	3	66-141/25
87-68-3	Hexachlorobutadiene	50	48.6	97	46.1	92	5	60-148/25
591-78-6	2-Hexanone	50	45.6	91	41.5	83	9	52-146/25
98-82-8	Isopropylbenzene	50	53.5	107	51.4	103	4	75-128/25
99-87-6	p-Isopropyltoluene	50	51.0	102	49.3	99	3	73-130/25
1634-04-4	Methyl Tert Butyl Ether	50	48.3	97	48.0	96	1	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)		45.4	91	43.0	86	5	60-145/25
74-95-3	Methylene bromide	50	45.8	92	44.9	90	2	76-127/25
75-09-2	Methylene chloride	50	51.0	102	50.3	101	1	70-130/25
91-20-3	Naphthalene	50	45.3	91	43.2	86	5	62-140/25
103-65-1	n-Propylbenzene	50	53.2	106	51.2	102	4	73-130/25
100-42-5	Styrene	50	50.8	102	49.3	99	3	70-129/25
630-20-6	1,1,1,2-Tetrachloroethane	50	49.3	99	48.1	96	2	81-126/25
79-34-5	1,1,2,2-Tetrachloroethane	50	46.4	93	44.8	90	4	63-142/25
127-18-4	Tetrachloroethene	50	48.1	96	46.4	93	4	70-130/25
109-99-9	Tetrahydrofuran	50	43.2	86	42.0	84	3	50-147/25
108-88-3	Toluene	50	49.6	99	48.3	97	3	77-121/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	44.6	89	42.7	85	4	30-150/25
87-61-6	1,2,3-Trichlorobenzene	50	46.2	92	44.1	88	5	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	45.8	92	44.4	89	3	64-136/25
71-55-6	1,1,1-Trichloroethane	50	53.3	107	52.0	104	2	70-142/25
79-00-5	1,1,2-Trichloroethane	50	48.2	96	47.7	95	1	79-123/25
79-01-6	Trichloroethene	50	52.0	104	50.6	101	3	72-128/25
75-69-4	Trichlorofluoromethane	50	49.2	98	48.0	96	2	54-151/25
96-18-4	1,2,3-Trichloropropane	50	46.6	93	44.8	90	4	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	51.6	103	49.8	100	4	73-130/25
108-67-8	1,3,5-Trimethylbenzene	50	51.2	102	49.2	98	4	73-130/25
75-01-4	Vinyl chloride	50	51.6	103	50.3	101	3	45-150/25
	m,p-Xylene	100	101	101	97.4	97	4	74-127/25
95-47-6	o-Xylene	50	49.7	99	48.2	96	3	79-125/25



Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSN1227-BS	N33202.D	1	03/19/09	RT	n/a	n/a	MSN1227
MSN1227-BSD	N33203.D	1	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

M81183-5, M81183-7, M81183-9

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	101%	102%	79-130%
2037-26-5	Toluene-D8	100%	100%	80-120%
460-00-4	4-Bromofluorobenzene	101%	101%	80-120%



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Method: SW846 8260B



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1228-BS	N33229.D	1	03/20/09	RT	n/a	n/a	MSN1228
MSN1228-BSD	N33230.D	1	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	60.7	121	61.2	122	1	30-150/25
107-13-1	Acrylonitrile	250	255	102	256	102	0	60-145/25
71-43-2	Benzene	50	58.3	117	57.2	114	2	78-120/25
108-86-1	Bromobenzene	50	53.4	107	54.0	108	1	76-120/25
75-27-4	Bromodichloromethane	50	60.7	121	60.6	121	0	70-137/25
75-25-2	Bromoform	50	45.5	91	46.2	92	2	66-136/25
74-83-9	Bromomethane	50	55.7	111	56.9	114	2	50-143/25
78-93-3	2-Butanone (MEK)	50	54.6	109	56.4	113	3	53-150/25
104-51-8	n-Butylbenzene	50	56.9	114	56.4	113	1	70-141/25
135-98-8	sec-Butylbenzene	50	60.1	120	60.0	120	0	74-130/25
98-06-6	tert-Butylbenzene	50	60.1	120	59.9	120	0	73-134/25
75-15-0	Carbon disulfide	50	63.9	128	62.4	125	2	56-147/25
56-23-5	Carbon tetrachloride	50	62.2	124	61.0	122	2	64-151/25
108-90-7	Chlorobenzene	50	53.6	107	53.6	107	0	75-120/25
75-00-3	Chloroethane	50	58.6	117	56.9	114	3	50-160/25
67-66-3	Chloroform	50	58.1	116	57.6	115	1	73-130/25
74-87-3	Chloromethane	50	50.6	101	48.1	96	5	40-150/25
95-49-8	o-Chlorotoluene	50	57.7	115	57.6	115	0	75-125/25
106-43-4	p-Chlorotoluene	50	56.7	113	56.8	114	0	73-127/25
96-12-8	1,2-Dibromo-3-chloropropane	50	45.6	91	48.1	96	5	53-149/25
124-48-1	Dibromochloromethane	50	57.6	115	57.8	116	0	77-130/25
106-93-4	1,2-Dibromoethane	50	51.4	103	51.5	103	0	70-134/25
95-50-1	1,2-Dichlorobenzene	50	52.4	105	52.8	106	1	76-122/25
541-73-1	1,3-Dichlorobenzene	50	53.3	107	53.5	107	0	73-124/25
106-46-7	1,4-Dichlorobenzene	50	52.7	105	52.6	105	0	73-123/25
75-71-8	Dichlorodifluoromethane	50	53.3	107	51.9	104	3	10-150/25
75-34-3	1,1-Dichloroethane	50	58.7	117	57.2	114	3	71-130/25
107-06-2	1,2-Dichloroethane	50	54.7	109	54.4	109	1	63-145/25
75-35-4	1,1-Dichloroethene	50	60.0	120	59.1	118	2	70-128/25
156-59-2	cis-1,2-Dichloroethene	50	57.8	116	57.6	115	0	70-123/25
156-60-5	trans-1,2-Dichloroethene	50	60.0	120	58.5	117	3	70-126/25
78-87-5	1,2-Dichloropropane	50	56.2	112	56.2	112	0	76-124/25
142-28-9	1,3-Dichloropropane	50	52.2	104	52.8	106	1	79-123/25
594-20-7	2,2-Dichloropropane	50	57.5	115	55.0	110	4	30-150/25
563-58-6	1,1-Dichloropropene	50	58.6	117	57.2	114	2	76-128/25
10061-01-5	cis-1,3-Dichloropropene	50	52.9	106	52.6	105	1	70-138/25



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1228-BS	N33229.D	1	03/20/09	RT	n/a	n/a	MSN1228
MSN1228-BSD	N33230.D	1	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	50.9	102	50.9	102	0	61-140/25
100-41-4	Ethylbenzene	50	56.2	112	55.6	111	1	79-123/25
76-13-1	Freon 113	50	65.7	131	65.1	130	1	66-141/25
87-68-3	Hexachlorobutadiene	50	55.8	112	54.6	109	2	60-148/25
591-78-6	2-Hexanone	50	50.9	102	51.6	103	1	52-146/25
98-82-8	Isopropylbenzene	50	61.0	122	60.9	122	0	75-128/25
99-87-6	p-Isopropyltoluene	50	58.2	116	58.1	116	0	73-130/25
1634-04-4	Methyl Tert Butyl Ether	50	55.3	111	55.4	111	0	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.3	99	49.7	99	1	60-145/25
74-95-3	Methylene bromide	50	51.9	104	52.5	105	1	76-127/25
75-09-2	Methylene chloride	50	60.0	120	59.5	119	1	70-130/25
91-20-3	Naphthalene	50	50.4	101	50.4	101	0	62-140/25
103-65-1	n-Propylbenzene	50	60.2	120	60.5	121	0	73-130/25
100-42-5	Styrene	50	57.0	114	56.4	113	1	70-129/25
630-20-6	1,1,1,2-Tetrachloroethane	50	54.8	110	54.9	110	0	81-126/25
79-34-5	1,1,2,2-Tetrachloroethane	50	51.4	103	52.8	106	3	63-142/25
127-18-4	Tetrachloroethene	50	54.2	108	53.3	107	2	70-130/25
109-99-9	Tetrahydrofuran	50	46.8	94	49.8	100	6	50-147/25
108-88-3	Toluene	50	56.6	113	56.3	113	1	77-121/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	49.7	99	51.5	103	4	30-150/25
87-61-6	1,2,3-Trichlorobenzene	50	51.3	103	51.4	103	0	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	52.0	104	51.5	103	1	64-136/25
71-55-6	1,1,1-Trichloroethane	50	62.1	124	60.4	121	3	70-142/25
79-00-5	1,1,2-Trichloroethane	50	54.8	110	54.7	109	0	79-123/25
79-01-6	Trichloroethene	50	59.4	119	59.2	118	0	72-128/25
75-69-4	Trichlorofluoromethane	50	56.8	114	55.6	111	2	54-151/25
96-18-4	1,2,3-Trichloropropane	50	51.3	103	52.9	106	3	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	58.6	117	58.7	117	0	73-130/25
108-67-8	1,3,5-Trimethylbenzene	50	58.5	117	58.4	117	0	73-130/25
75-01-4	Vinyl chloride	50	61.6	123	59.0	118	4	45-150/25
	m,p-Xylene	100	112	112	111	111	1	74-127/25
95-47-6	o-Xylene	50	54.9	110	55.1	110	0	79-125/25



5.2.5

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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1228-BS	N33229.D	1	03/20/09	RT	n/a	n/a	MSN1228
MSN1228-BSD	N33230.D	1	03/20/09	RT	n/a	n/a	MSN1228
I							

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	Dibromofluoromethane	105%	104%	79-130%
2037-26-5	Toluene-D8	100%	101%	80-120%
460-00-4	4-Bromofluorobenzene	102%	104%	80-120%



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81180-15MS	N33160.D	100	03/17/09	RT	n/a	n/a	MSN1225
M81180-15MSD	N33161.D	100	03/17/09	RT	n/a	n/a	MSN1225
M81180-15	N33159.D	100	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

No. Color Color	CAS No.	Compound	M81180-15 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-13-1 Acrylonitrile	67-64-1	Acetone	ND	5000	3850	77	4040	81	5	20-150/30
T1-43-2 Benzene										
108-86-1 Bromobenzene ND 5000 4600 92 4810 96 4 71-121/30 75-27-4 Bromodichloromethane ND 5000 5150 103 5420 108 5 64-144/30 77-121/30 75-25-2 Bromoform ND 5000 3160 63 3360 67 6 57-133/30 74-83-9 Bromomethane ND 5000 5210 104 5670 113 8 40-146/30 78-93-3 2-Butanone (MEK) ND 5000 1970 39 2200 44 11 34-150/30 104-51-8 n-Butylbenzene ND 5000 5130 103 5450 109 6 61-142/30 135-98-8 sec-Butylbenzene 91.4 5000 5100 100 5420 107 6 70-130/30 98-06-6 tert-Butylbenzene ND 5000 5160 103 5390 108 4 70-137/30 75-15-0 Carbon disulfide ND 5000 5460 109 5620 112 3 42-151/30 108-90-7 Chlorobenzene ND 5000 5460 109 5620 112 3 42-151/30 108-90-7 Chlorobenzene ND 5000 5200 104 5260 105 1 46-169/30 108-90-7 Chlorobenzene ND 5000 5200 104 5260 105 1 46-169/30 106-46-3 Chloroform ND 5000 5000 5000 101 5400 108 7 73-150/30 75-49-8 o-Chlorotoluene ND 5000 5590 112 6060 121 8 59-147/30 104-48-1 Dibromochloromethane ND 5000 5590 112 6060 121 8 59-147/30 104-48-1 Dibromochloromethane ND 5000 4960 99 5310 106 7 70-130/30 106-93-4 1,2-Dibromo-3-chloropropane ND 5000 4370 88 4740 95 8 70-130/30 106-93-4 1,2-Dibromochlane ND 5000 4370 88 4740 95 8 70-130/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 156-60-2 1,2-Dichlorobenzene ND 5000 4390 89 4640 93 5 60-153/30 156-60-5 trans-1,2-Dichlorobenzene ND 5000 4390 80 4390 80 4390 80 4390 80 4390 80 4390 4490 95 50-150/30 4390 4390 4490 95 50-150/30 4390 4390 43		•								
75-27-4 Bromodichloromethane ND 5000 5150 103 5420 108 5 64-144/30 75-25-2 Bromoform ND 5000 3160 63 3360 67 6 57-133/30 74-83-9 Bromomethane ND 5000 5210 104 5670 113 8 40-146/30 78-93-3 2-Butanone (MEK) ND 5000 5130 103 5450 109 6 61-142/30 135-98-8 sec-Butylbenzene 91.4 5000 5100 100 5420 107 6 70-130/30 98-06-6 tert-Butylbenzene ND 5000 5160 103 5390 108 4 70-137/30 75-15-0 Carbon disulfide ND 5000 5460 109 5620 112 3 42-151/30 108-90-7 Chlorobenzene ND 5000 5460 109 5620 112 3 42-151/30 108-94-9										
75-25-2 Bromoform ND 5000 3160 63 3360 67 6 57-133/30 74-83-9 Bromomethane ND 5000 5210 104 5670 113 8 40-146/30 78-93-3 2-Butanone (MEK) ND 5000 1970 39 2200 44 11 34-150/30 104-51-8 n-Butylbenzene ND 5000 5130 103 5450 109 6 61-142/30 135-98-8 sec-Butylbenzene ND 5000 5100 100 5420 107 6 70-130/30 98-06-6 tert-Butylbenzene ND 5000 5160 103 5390 108 4 70-137/30 75-15-5 Carbon disulfide ND 5000 5460 109 5620 112 3 42-151/30 108-90-7 Chlorobenzene ND 5000 510 102 5420 108 6 56-158/30 108-90-7 <										
74-83-9 Bromomethane ND 5000 5210 104 5670 113 8 40-146/30 78-93-3 2-Butanone (MEK) ND 5000 1970 39 2200 44 11 34-150/30 104-51-8 n-Butylbenzene ND 5000 5130 103 5450 109 6 61-142/30 135-98-8 sec-Butylbenzene 91.4 5000 5100 100 5420 107 6 70-130/30 98-06-6 tert-Butylbenzene ND 5000 5160 103 5390 108 4 70-137/30 75-15-0 Carbon disulfide ND 5000 5460 109 5620 112 3 42-151/30 108-90-7 Chloroferme ND 5000 5100 104 5260 105 1 46-169/30 67-66-3 Chloroform ND 5000 5200 104 5260 105 1 46-169/30 74-87-3										
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56-23-5 Carbon tetrachloride ND 5000 5110 102 5420 108 6 56-158/30 108-90-7 Chlorobenzene ND 5000 4700 94 4940 99 5 72-122/30 75-00-3 Chlorothane ND 5000 5200 104 5260 105 1 46-169/30 67-66-3 Chloroform ND 5000 4970 99 5180 104 4 70-141/30 74-87-3 Chlorotoluene ND 5000 5040 101 5400 108 7 33-150/30 95-49-8 o-Chlorotoluene ND 5000 5590 112 6060 121 8 59-147/30 106-43-4 p-Chlorotoluene ND 5000 4960 99 5310 106 7 70-130/30 106-93-4 1,2-Dibromo-3-chloropenzene ND 5000 4390 88 4740 95 8 70-130/30 95-50-1		•								
108-90-7 Chlorobenzene ND 5000 4700 94 4940 99 5 72-122/30	56-23-5	Carbon tetrachloride	ND		5110			108		
67-66-3 Chloroform ND 5000 4970 99 5180 104 4 70-141/30 74-87-3 Chloromethane ND 5000 5040 101 5400 108 7 33-150/30 95-49-8 o-Chlorotoluene ND 5000 5590 112 6060 121 8 59-147/30 106-43-4 p-Chlorotoluene ND 5000 4960 99 5310 106 7 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 5000 2540 51 2710 54 6 47-156/30 124-48-1 Dibromochloromethane ND 5000 4390 88 4740 95 8 70-130/30 106-93-4 1,2-Dichlorobenzene ND 5000 3710 74 3930 79 6 65-138/30 541-73-1 1,3-Dichlorobenzene ND 5000 4370 87 4680 94 7 70-124/30 75-								99	5	
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95-49-8 o-Chlorotoluene ND 5000 5590 112 6060 121 8 59-147/30 106-43-4 p-Chlorotoluene ND 5000 4960 99 5310 106 7 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 5000 2540 51 2710 54 6 47-156/30 124-48-1 Dibromochloromethane ND 5000 4390 88 4740 95 8 70-130/30 106-93-4 1,2-Dibromoethane ND 5000 3710 74 3930 79 6 65-138/30 95-50-1 1,2-Dichlorobenzene ND 5000 4370 87 4680 94 7 72-123/30 541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 4390 88 4710 94 7 70-124/30	67-66-3	Chloroform	ND	5000	4970	99	5180	104	4	70-141/30
106-43-4 p-Chlorotoluene ND 5000 4960 99 5310 106 7 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 5000 2540 51 2710 54 6 47-156/30 124-48-1 Dibromochloromethane ND 5000 4390 88 4740 95 8 70-130/30 106-93-4 1,2-Dibromoethane ND 5000 3710 74 3930 79 6 65-138/30 95-50-1 1,2-Dichlorobenzene ND 5000 4370 87 4680 94 7 72-123/30 541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 <	74-87-3	Chloromethane	ND	5000	5040	101	5400	108	7	33-150/30
96-12-8 1,2-Dibromo-3-chloropropane ND 5000 2540 51 2710 54 6 47-156/30 124-48-1 Dibromochloromethane ND 5000 4390 88 4740 95 8 70-130/30 106-93-4 1,2-Dibromoethane ND 5000 3710 74 3930 79 6 65-138/30 95-50-1 1,2-Dichlorobenzene ND 5000 4370 87 4680 94 7 72-123/30 541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30	95-49-8	o-Chlorotoluene	ND	5000	5590	112	6060	121	8	59-147/30
96-12-8 1,2-Dibromo-3-chloropropane ND 5000 2540 51 2710 54 6 47-156/30 124-48-1 Dibromochloromethane ND 5000 4390 88 4740 95 8 70-130/30 106-93-4 1,2-Dibromoethane ND 5000 3710 74 3930 79 6 65-138/30 95-50-1 1,2-Dichlorobenzene ND 5000 4370 87 4680 94 7 72-123/30 541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30	106-43-4	p-Chlorotoluene	ND	5000	4960	99	5310	106	7	70-130/30
106-93-4 1,2-Dibromoethane ND 5000 3710 74 3930 79 6 65-138/30 95-50-1 1,2-Dichlorobenzene ND 5000 4370 87 4680 94 7 72-123/30 541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30 107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30	96-12-8	1,2-Dibromo-3-chloropropane	ND	5000	2540	51	2710	54	6	47-156/30
95-50-1 1,2-Dichlorobenzene ND 5000 4370 87 4680 94 7 72-123/30 541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30 107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30	124-48-1	Dibromochloromethane	ND	5000	4390	88	4740	95	8	70-130/30
541-73-1 1,3-Dichlorobenzene ND 5000 4500 90 4820 96 7 70-124/30 106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30 107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 78-87-5 1,2-Dichloropropane ND 5000 5100 102 5310 106 4 70-130/30	106-93-4	1,2-Dibromoethane	ND	5000	3710	74	3930	79	6	65-138/30
106-46-7 1,4-Dichlorobenzene ND 5000 4390 88 4710 94 7 70-124/30 75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30 107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 <	95-50-1	1,2-Dichlorobenzene	ND	5000	4370	87	4680	94	7	72-123/30
75-71-8 Dichlorodifluoromethane ND 5000 5150 103 5240 105 2 10-150/30 75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30 107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 <	541-73-1	1,3-Dichlorobenzene	ND	5000	4500	90	4820	96	7	70-124/30
75-34-3 1,1-Dichloroethane ND 5000 4990 100 5170 103 4 70-141/30 107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4980 100 5220 104 5 73-134/30 <td>106-46-7</td> <td>1,4-Dichlorobenzene</td> <td>ND</td> <td>5000</td> <td>4390</td> <td>88</td> <td>4710</td> <td>94</td> <td>7</td> <td>70-124/30</td>	106-46-7	1,4-Dichlorobenzene	ND	5000	4390	88	4710	94	7	70-124/30
107-06-2 1,2-Dichloroethane ND 5000 4430 89 4640 93 5 60-153/30 75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30 <td>75-71-8</td> <td>Dichlorodifluoromethane</td> <td>ND</td> <td>5000</td> <td>5150</td> <td>103</td> <td>5240</td> <td>105</td> <td>2</td> <td>10-150/30</td>	75-71-8	Dichlorodifluoromethane	ND	5000	5150	103	5240	105	2	10-150/30
75-35-4 1,1-Dichloroethene ND 5000 5110 102 5300 106 4 63-134/30 156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	75-34-3	1,1-Dichloroethane	ND	5000	4990	100	5170	103	4	70-141/30
156-59-2 cis-1,2-Dichloroethene 32.4 5000 5000 99 5170 103 3 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	107-06-2	1,2-Dichloroethane	ND	5000	4430	89	4640	93	5	60-153/30
156-60-5 trans-1,2-Dichloroethene ND 5000 5100 102 5310 106 4 70-130/30 78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	75-35-4	1,1-Dichloroethene	ND	5000	5110	102	5300	106	4	63-134/30
78-87-5 1,2-Dichloropropane ND 5000 4810 96 5080 102 5 73-130/30 142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	156-59-2	cis-1,2-Dichloroethene	32.4	5000	5000	99	5170	103	3	64-130/30
142-28-9 1,3-Dichloropropane ND 5000 3910 78 4190 84 7 75-127/30 594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	156-60-5	trans-1,2-Dichloroethene	ND	5000	5100	102	5310	106	4	70-130/30
594-20-7 2,2-Dichloropropane ND 5000 4300 86 4410 88 3 30-150/30 563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	78-87-5	1,2-Dichloropropane	ND	5000	4810		5080	102	5	73-130/30
563-58-6 1,1-Dichloropropene ND 5000 4980 100 5220 104 5 73-134/30	142-28-9	1,3-Dichloropropane	ND	5000	3910	78	4190			75-127/30
	594-20-7	2,2-Dichloropropane	ND	5000	4300	86	4410	88	3	30-150/30
10061-01-5 cis-1,3-Dichloropropene ND 5000 4350 87 4630 93 6 58-142/30	563-58-6	1,1-Dichloropropene	ND			100	5220		5	
	10061-01-5	cis-1,3-Dichloropropene	ND	5000	4350	87	4630	93	6	58-142/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81180-15MS	N33160.D	100	03/17/09	RT	n/a	n/a	MSN1225
M81180-15MSD	N33161.D	100	03/17/09	RT	n/a	n/a	MSN1225
M81180-15	N33159.D	100	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

CAS No.	Compound	M81180-15 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND	5000	3900	78	4150	83	6	53-143/30
100-41-4	Ethylbenzene	3640	5000	8520	98	9110	109	7	60-138/30
76-13-1	Freon 113	ND	5000	5550	111	5740	115	3	60-149/30
87-68-3	Hexachlorobutadiene	ND	5000	3900	78	4250	85	9	54-135/30
591-78-6	2-Hexanone	ND	5000	1990	40	2100	42	5	32-148/30
98-82-8	Isopropylbenzene	309	5000	5500	104	5950	113	8	70-130/30
99-87-6	p-Isopropyltoluene	45.8	5000	4920	97	5220	103	6	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	5000	3730	75	3870	77	4	54-144/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5000	2570	51* a	2690	54	5	53-151/30
74-95-3	Methylene bromide	ND	5000	4160	83	4380	88	5	73-136/30
75-09-2	Methylene chloride	ND	5000	5160	103	5360	107	4	64-140/30
91-20-3	Naphthalene	649	5000	3440	56	3840	64	11	48-143/30
103-65-1	n-Propylbenzene	897	5000	6120	104	6530	113	6	65-136/30
100-42-5	Styrene	ND	5000	4910	98	5200	104	6	61-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	5000	4720	94	5020	100	6	78-128/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	5000	3130	63	3360	67	7	60-150/30
127-18-4	Tetrachloroethene	ND	5000	4670	93	4870	97	4	70-130/30
109-99-9	Tetrahydrofuran	ND	5000	3390	68	3450	69	2	40-150/30
108-88-3	Toluene	13900	5000	18800	98	19900	120	6	66-134/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5000	2700	54	2940	59	9	20-150/30
87-61-6	1,2,3-Trichlorobenzene	ND	5000	3500	70	3860	77	10	57-127/30
120-82-1	1,2,4-Trichlorobenzene	ND	5000	3980	80	4330	87	8	57-130/30
71-55-6	1,1,1-Trichloroethane	ND	5000	5230	105	5490	110	5	62-153/30
79-00-5	1,1,2-Trichloroethane	ND	5000	4140	83	4360	87	5	77-127/30
79-01-6	Trichloroethene	ND	5000	5080	102	5270	105	4	66-132/30
75-69-4	Trichlorofluoromethane	ND	5000	4810	96	5020	100	4	48-161/30
96-18-4	1,2,3-Trichloropropane	ND	5000	3060	61	3280	66	7	61-138/30
95-63-6	1,2,4-Trimethylbenzene	6790	5000	11900	102	13300	130	11	54-143/30
108-67-8	1,3,5-Trimethylbenzene	1930	5000	7000	101	7610	114	8	62-139/30
75-01-4	Vinyl chloride	ND	5000	6620	132	6790	136	3	38-150/30
	m,p-Xylene	15200	10000	24500	93	26400	112	7	55-142/30
95-47-6	o-Xylene	6290	5000	11100	96	11900	112	7	65-136/30



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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81180-15MS	N33160.D	100	03/17/09	RT	n/a	n/a	MSN1225
M81180-15MSD	N33161.D	100	03/17/09	RT	n/a	n/a	MSN1225
M81180-15	N33159.D	100	03/17/09	RT	n/a	n/a	MSN1225

The QC reported here applies to the following samples:

Method: SW846 8260B

M81183-1, M81183-3

CAS No.	Surrogate Recoveries	MS	MSD	M81180-15	Limits
1868-53-7 2037-26-5	Toluene-D8	102% 100%	102% 101%	101% 99%	79-130% 80-120%
460-00-4	4-Bromofluorobenzene	101%	102%	104%	80-120%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.



Matrix Spike/Matrix Spike Duplicate Summary Page 1 of 3

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M81180-14MS	N33181.D	20	03/18/09	RT	n/a	n/a	MSN1226
M81180-14MSD	N33182.D	20	03/18/09	RT	n/a	n/a	MSN1226
M81180-14	N33180.D	20	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

CAS No.	Compound	M81180-14 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67.64.1	Apatoma	ND	1000	1160	116	964	96	10	20-150/30
67-64-1 107-13-1	Acetone Acrylonitrile	ND ND	5000	4980	116 100	4340	96 87	18 14	55-150/30
71-43-2	Benzene	3500	1000	4690	119	4060	56* a	14	70-130/30
108-86-1	Bromobenzene	ND	1000	1050	105	938	94	14	70-130/30
75-27-4	Bromodichloromethane	ND ND	1000	1180	118	1050	105	12	64-144/30
75-27-4 75-25-2	Bromoform	ND ND	1000	909	91	830	83	9	57-133/30
73-23-2 74-83-9	Bromomethane	ND ND	1000	1080	108	943	94	14	40-146/30
74-83-9 78-93-3	2-Butanone (MEK)	ND ND	1000	782	78	681	68	14	34-150/30
104-51-8	n-Butylbenzene	ND 274	1000	1590	132	1400	113	13	61-142/30
135-98-8	sec-Butylbenzene	125	1000	1390	116	1130	101	12	70-130/30
133-98-8 98-06-6	tert-Butylbenzene	ND	1000	1280	117	1030	101	13	70-130/30
75-15-0	Carbon disulfide	ND ND	1000	1270	127	1060	103	18	42-151/30
75-13-0 56-23-5	Carbon disulide Carbon tetrachloride	ND ND	1000	1270	127	1060	106	18	56-158/30
108-90-7	Chlorobenzene	ND ND	1000	1090	109	949	95	14	72-122/30
75-00-3	Chloroethane	ND ND	1000	1170	109	949	93 96	20	46-169/30
67-66-3	Chloroform	ND ND	1000	1170	117	978	98	15	70-141/30
74-87-3	Chloromethane	ND ND	1000	942	94	788	98 79	18	33-150/30
95-49-8	o-Chlorotoluene	ND ND	1000	1880	188* b	1660	166* b	12	59-147/30
93-49-8 106-43-4	p-Chlorotoluene	ND ND	1000	1390	139* b	1220	122	13	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane		1000	1010	101	918	92	10	47-156/30
90-12-8 124-48-1	Dibromochloromethane	ND ND	1000	1130	113	1010	101	10	70-130/30
				1030		916	92	12	
106-93-4 95-50-1	1,2-Dibromoethane	ND ND	1000	1030	103	916	92 92	12	65-138/30
93-30-1 541-73-1	1,2-Dichlorobenzene	ND ND	1000	1040	104 104	924	92	12	72-123/30
341-73-1 106-46-7	1,3-Dichlorobenzene 1,4-Dichlorobenzene	ND ND	1000 1000	1040	104	928	93	11	70-124/30 70-124/30
75-71-8	Dichlorodifluoromethane	ND ND	1000	1090	103	909	91	18	10-124/30
75-71-8 75-34-3		ND ND	1000	1160	116	963	96	19	70-141/30
107-06-2	1, 1-Dichloroethane		1000	1080		963	96 94	19	60-153/30
75-35-4	1,2-Dichloroethane	ND ND	1000	1200	108	1020	102	14	63-134/30
	1,1-Dichloroethene			2340	120		102 88		
156-59-2	cis-1,2-Dichloroethene	1100	1000	1200	124 120	1980		17	64-130/30
156-60-5	trans-1,2-Dichloroethene	ND	1000			1010	101	17	70-130/30
78-87-5	1,2-Dichloropropane	ND	1000	1120	112	976	98	14	73-130/30
142-28-9	1,3-Dichloropropane	ND ND	1000	1020	102	905 907	91	12 17	75-127/30
594-20-7	2,2-Dichloropropane	ND	1000	1080	108		91		30-150/30
563-58-6	1,1-Dichloropropene	ND ND	1000	1160	116	999 901	100 90	15 14	73-134/30
10001-01-3	cis-1,3-Dichloropropene	ND	1000	1040	104	901	90	14	58-142/30



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Method: SW846 8260B

3.2

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M81180-14MS	N33181.D	20	03/18/09	RT	n/a	n/a	MSN1226
M81180-14MSD	N33182.D	20	03/18/09	RT	n/a	n/a	MSN1226
M81180-14	N33180.D	20	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

CAS No.	Compound	M81180 ug/l	0-14 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		1000	1000	100	891	89	12	53-143/30
100-41-4	Ethylbenzene	6320		1000	7000	68	6110	-21* a	14	60-138/30
76-13-1	Freon 113	ND		1000	1320	132	1110	111	17	60-149/30
87-68-3	Hexachlorobutadiene	ND		1000	1030	103	936	94	10	54-135/30
591-78-6	2-Hexanone	ND		1000	838	84	742	74	12	32-148/30
98-82-8	Isopropylbenzene	413		1000	1560	115	1370	96	13	70-130/30
99-87-6	p-Isopropyltoluene	66.5		1000	1220	115	1080	101	12	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		1000	1090	109	948	95	14	54-144/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1000	982	98	894	89	9	53-151/30
74-95-3	Methylene bromide	ND		1000	1050	105	922	92	13	73-136/30
75-09-2	Methylene chloride	ND		1000	1190	119	1010	101	16	64-140/30
91-20-3	Naphthalene	1700		1000	2490	79	2280	58	9	48-143/30
103-65-1	n-Propylbenzene	1300		1000	2280	98	2010	71	13	65-136/30
100-42-5	Styrene	59.9		1000	1240	118	1090	103	13	61-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		1000	1110	111	978	98	13	78-128/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		1000	814	81	735	74	10	60-150/30
127-18-4	Tetrachloroethene	192		1000	1300	111	1120	93	15	70-130/30
109-99-9	Tetrahydrofuran	ND		1000	1290	129	1100	110	16	40-150/30
108-88-3	Toluene	22200	E	1000	22600	40* a	19900	-230* a	13	66-134/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		1000	1020	102	899	90	13	20-150/30
87-61-6	1,2,3-Trichlorobenzene	ND		1000	1020	102	949	95	7	57-127/30
120-82-1	1,2,4-Trichlorobenzene	ND		1000	1060	106	967	97	9	57-130/30
71-55-6	1,1,1-Trichloroethane	ND		1000	1230	123	1040	104	17	62-153/30
79-00-5	1,1,2-Trichloroethane	ND		1000	1090	109	968	97	12	77-127/30
79-01-6	Trichloroethene	133		1000	1330	120	1160	103	14	66-132/30
75-69-4	Trichlorofluoromethane	ND		1000	1140	114	947	95	18	48-161/30
96-18-4	1,2,3-Trichloropropane	ND		1000	988	99	897	90	10	61-138/30
95-63-6	1,2,4-Trimethylbenzene	10100	E	1000	9790	-31* a	8670	-143* a	12	54-143/30
108-67-8	1,3,5-Trimethylbenzene	2940		1000	3650	71	3240	30* a	12	62-139/30
75-01-4	Vinyl chloride	ND		1000	1190	119	985	99	19	38-150/30
	m,p-Xylene	20500	E	2000	20700	10* a	18100	-120* a		55-142/30
95-47-6	o-Xylene	11800	E	1000	12000	20* a	10400	-140* a	14	65-136/30



5.3.2

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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Bv	Prep Date	Prep Batch	Analytical Batch
M81180-14MS	N33181.D	20	03/18/09	RT	n/a	n/a	MSN1226
M81180-14MSD	N33182.D	20	03/18/09	RT	n/a	n/a	MSN1226
M81180-14	N33180.D	20	03/18/09	RT	n/a	n/a	MSN1226

The QC reported here applies to the following samples:

M81183-11

CAS No.	Surrogate Recoveries	MS	MSD	M81180-14	Limits
1868-53-7		104%	99%	103%	79-130%
2037-26-5 460-00-4	Toluene-D8 4-Bromofluorobenzene	100% 99%	100% 100%	100% 101%	80-120% 80-120%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.



Page 1 of 3

Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81205-7MS	G88893.D	1	03/19/09	ΕĹ	n/a	n/a	MSG3590
M81205-7MSD	G88894.D	1	03/19/09	EL	n/a	n/a	MSG3590
M81205-7	G88884.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Compound	M81205-7 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
C115 110.	Compound	ug/1 V	ug/I	ug/1	70	ug/ I	70	MI D	Rec/RID
67-64-1	Acetone	ND	50	31.8	64	28.3	57	12	20-150/30
107-13-1	Acrylonitrile	ND	250	295	118	276	110	7	55-150/30
71-43-2	Benzene	ND	50	49.6	99	48.9	98	1	70-130/30
108-86-1	Bromobenzene	ND	50	49.6	99	49.7	99	0	71-121/30
75-27-4	Bromodichloromethane	ND	50	55.8	112	54.7	109	2	64-144/30
75-25-2	Bromoform	ND	50	51.9	104	50.4	101	3	57-133/30
74-83-9	Bromomethane	ND	50	48.3	97	46.5	93	4	40-146/30
78-93-3	2-Butanone (MEK)	ND	50	41.1	82	38.5	77	7	34-150/30
104-51-8	n-Butylbenzene	ND	50	52.2	104	51.5	103	1	61-142/30
135-98-8	sec-Butylbenzene	ND	50	49.9	100	50.1	100	0	70-130/30
98-06-6	tert-Butylbenzene	ND	50	49.7	99	49.2	98	1	70-137/30
75-15-0	Carbon disulfide	ND	50	43.6	87	41.3	83	5	42-151/30
56-23-5	Carbon tetrachloride	ND	50	54.9	110	53.5	107	3	56-158/30
108-90-7	Chlorobenzene	ND	50	49.5	99	48.6	97	2	72-122/30
75-00-3	Chloroethane	ND	50	51.2	102	49.2	98	4	46-169/30
67-66-3	Chloroform	ND	50	51.8	104	49.6	99	4	70-141/30
74-87-3	Chloromethane	ND	50	61.7	123	56.9	114	8	33-150/30
95-49-8	o-Chlorotoluene	ND	50	47.9	96	47.8	96	0	59-147/30
106-43-4	p-Chlorotoluene	ND	50	49.1	98	49.1	98	0	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	47.9	96	47.4	95	1	47-156/30
124-48-1	Dibromochloromethane	ND	50	53.7	107	52.7	105	2	70-130/30
106-93-4	1,2-Dibromoethane	ND	50	52.2	104	51.1	102	2	65-138/30
95-50-1	1,2-Dichlorobenzene	ND	50	51.6	103	51.1	102	1	72-123/30
541-73-1	1,3-Dichlorobenzene	ND	50	51.1	102	50.9	102	0	70-124/30
106-46-7	1,4-Dichlorobenzene	ND	50	49.7	99	49.6	99	0	70-124/30
75-71-8	Dichlorodifluoromethane	ND	50	66.4	133	63.1	126	5	10-150/30
75-34-3	1,1-Dichloroethane	ND	50	52.8	106	50.4	101	5	70-141/30
107-06-2	1,2-Dichloroethane	ND	50	56.2	112	53.6	107	5	60-153/30
75-35-4	1,1-Dichloroethene	ND	50	50.5	101	48.2	96	5	63-134/30
156-59-2	cis-1,2-Dichloroethene	ND	50	49.9	100	48.3	97	3	64-130/30
156-60-5	trans-1,2-Dichloroethene	ND	50	52.7	105	50.5	101	4	70-130/30
78-87-5	1,2-Dichloropropane	ND	50	52.0	104	50.7	101	3	73-130/30
142-28-9	1,3-Dichloropropane	ND	50	51.5	103	50.5	101	2	75-127/30
594-20-7	2,2-Dichloropropane	ND	50	53.7	107	50.6	101	6	30-150/30
563-58-6	1,1-Dichloropropene	ND	50	52.7	105	51.6	103	2	73-134/30
10061-01-5	cis-1,3-Dichloropropene	ND	50	51.3	103	49.8	100	3	58-142/30

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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81205-7MS	G88893.D	1	03/19/09	EL	n/a	n/a	MSG3590
M81205-7MSD	G88894.D	1	03/19/09	EL	n/a	n/a	MSG3590
M81205-7	G88884.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Compound	M81205 ug/l	-7 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		50	52.6	105	51.9	104	1	53-143/30
100-41-4	Ethylbenzene	ND		50	51.0	102	49.6	99	3	60-138/30
76-13-1	Freon 113	ND		50	56.1	112	53.5	107	5	60-149/30
87-68-3	Hexachlorobutadiene	ND		50	48.2	96	47.7	95	1	54-135/30
591-78-6	2-Hexanone	ND		50	45.1	90	43.6	87	3	32-148/30
98-82-8	Isopropylbenzene	ND		50	49.9	100	50.3	101	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		50	50.4	101	51.0	102	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		50	52.4	105	50.6	101	3	54-144/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		50	61.4	123	59.2	118	4	53-151/30
74-95-3	Methylene bromide	ND		50	52.7	105	50.4	101	4	73-136/30
75-09-2	Methylene chloride	ND		50	53.9	108	51.4	103	5	64-140/30
91-20-3	Naphthalene	ND		50	37.7	75	44.1	88	16	48-143/30
103-65-1	n-Propylbenzene	ND		50	51.4	103	51.1	102	1	65-136/30
100-42-5	Styrene	ND		50	50.7	101	49.3	99	3	61-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		50	51.6	103	50.6	101	2	78-128/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		50	50.3	101	50.4	101	0	60-150/30
127-18-4	Tetrachloroethene	ND		50	50.8	102	49.7	99	2	70-130/30
109-99-9	Tetrahydrofuran	ND		50	58.5	117	53.8	108	8	40-150/30
108-88-3	Toluene	ND		50	50.8	102	49.7	99	2	66-134/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		50	42.4	85	40.0	80	6	20-150/30
87-61-6	1,2,3-Trichlorobenzene	ND		50	38.7	77	39.3	79	2	57-127/30
120-82-1	1,2,4-Trichlorobenzene	ND		50	44.0	88	43.8	88	0	57-130/30
71-55-6	1,1,1-Trichloroethane	ND		50	53.8	108	51.1	102	5	62-153/30
79-00-5	1,1,2-Trichloroethane	ND		50	52.5	105	51.8	104	1	77-127/30
79-01-6	Trichloroethene	ND		50	53.5	107	52.0	104	3	66-132/30
75-69-4	Trichlorofluoromethane	ND		50	51.1	102	48.1	96	6	48-161/30
96-18-4	1,2,3-Trichloropropane	ND		50	50.6	101	50.5	101	0	61-138/30
95-63-6	1,2,4-Trimethylbenzene	ND		50	51.5	103	51.9	104	1	54-143/30
108-67-8	1,3,5-Trimethylbenzene	ND		50	49.6	99	49.8	100	0	62-139/30
75-01-4	Vinyl chloride	ND		50	64.4	129	62.3	125	3	38-150/30
	m,p-Xylene	ND		100	102	102	99.8	100	2	55-142/30
95-47-6	o-Xylene	ND		50	50.9	102	49.7	99	2	65-136/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81205-7MS	G88893.D	1	03/19/09	EL	n/a	n/a	MSG3590
M81205-7MSD	G88894.D	1	03/19/09	EL	n/a	n/a	MSG3590
M81205-7	G88884.D	1	03/19/09	EL	n/a	n/a	MSG3590

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	MS	MSD	M81205-7	Limits
	Dibromofluoromethane Toluene-D8	104% 100%	102% 101%	103% 100%	79-130% 80-120%
460-00-4	4-Bromofluorobenzene	95%	96%	116%	80-120%



Matrix Spike/Matrix Spike Duplicate Summary Page 1 of 3

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Bv	Prep Date	Prep Batch	Analytical Batch
M81235-6MS	N33222.D	25	03/19/09	RT	n/a	n/a	MSN1227
M81235-6MSD	N33223.D	25	03/19/09	RT	n/a	n/a	MSN1227
M81235-6	N33221.D	25	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

CAS No.	Compound	M81235- ug/l	-6 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		1250	1020	82	936	75	9	20-150/30
107-13-1	Acrylonitrile	ND		6250	4430	71	4210	67	5	55-150/30
71-43-2	Benzene	25.9		1250	1510	119	1380	108	9	70-130/30
108-86-1	Bromobenzene	ND		1250	1350	108	1290	103	5	71-121/30
75-27-4	Bromodichloromethane	ND		1250	1500	120	1410	113	6	64-144/30
75-25-2	Bromoform	ND		1250	879	70	848	68	4	57-133/30
74-83-9	Bromomethane	ND		1250	1410	113	1430	114	1	40-146/30
78-93-3	2-Butanone (MEK)	ND		1250	634	51	613	49	3	34-150/30
104-51-8	n-Butylbenzene	13.0		1250	1380	109	1280	101	8	61-142/30
135-98-8	sec-Butylbenzene	ND		1250	1490	119	1370	110	8	70-130/30
98-06-6	tert-Butylbenzene	ND		1250	1530	122	1400	112	9	70-137/30
75-15-0	Carbon disulfide	ND		1250	1630	130	1480	118	10	42-151/30
56-23-5	Carbon tetrachloride	ND		1250	1540	123	1410	113	9	56-158/30
108-90-7	Chlorobenzene	ND		1250	1380	110	1260	101	9	72-122/30
75-00-3	Chloroethane	ND		1250	1570	126	1400	112	11	46-169/30
67-66-3	Chloroform	ND		1250	1500	120	1360	109	10	70-141/30
74-87-3	Chloromethane	ND		1250	1530	122	1330	106	14	33-150/30
95-49-8	o-Chlorotoluene	ND		1250	1510	121	1420	114	6	59-147/30
106-43-4	p-Chlorotoluene	ND		1250	1450	116	1370	110	6	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		1250	683	55	676	54	1	47-156/30
124-48-1	Dibromochloromethane	ND		1250	1300	104	1200	96	8	70-130/30
106-93-4	1,2-Dibromoethane	ND		1250	1050	84	1000	80	5	65-138/30
95-50-1	1,2-Dichlorobenzene	ND		1250	1270	102	1220	98	4	72-123/30
541-73-1	1,3-Dichlorobenzene	ND		1250	1320	106	1260	101	5	70-124/30
106-46-7	1,4-Dichlorobenzene	ND		1250	1300	104	1240	99	5	70-124/30
75-71-8	Dichlorodifluoromethane	ND		1250	1470	118	1290	103	13	10-150/30
75-34-3	1,1-Dichloroethane	ND		1250	1500	120	1370	110	9	70-141/30
107-06-2	1,2-Dichloroethane	ND		1250	1290	103	1220	98	6	60-153/30
75-35-4	1,1-Dichloroethene	ND		1250	1550	124	1390	111	11	63-134/30
156-59-2	cis-1,2-Dichloroethene	ND		1250	1490	119	1360	109	9	64-130/30
156-60-5	trans-1,2-Dichloroethene	ND		1250	1540	123	1390	111	10	70-130/30
78-87-5	1,2-Dichloropropane	ND		1250	1430	114	1310	105	9	73-130/30
142-28-9	1,3-Dichloropropane	ND		1250	1180	94	1100	88	7	75-127/30
594-20-7	2,2-Dichloropropane	ND		1250	1270	102	1140	91	11	30-150/30
563-58-6	1,1-Dichloropropene	ND		1250	1470	118	1350	108	9	73-134/30
10061-01-5	cis-1,3-Dichloropropene	ND		1250	1270	102	1180	94	7	58-142/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M81235-6MS	N33222.D	25	03/19/09	RT	n/a	n/a	MSN1227
M81235-6MSD	N33223.D	25	03/19/09	RT	n/a	n/a	MSN1227
M81235-6	N33221.D	25	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples:

M81183-5, M81183-7, M81183-9

CAS No.	Compound	M81235 ug/l	-6 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		1250	1140	91	1070	86	6	53-143/30
100-41-4	Ethylbenzene	241		1250	1660	114	1520	102	9	60-138/30
76-13-1	Freon 113	ND		1250	1700	136	1510	121	12	60-149/30
87-68-3	Hexachlorobutadiene	ND		1250	1150	92	1080	86	6	54-135/30
591-78-6	2-Hexanone	ND		1250	568	45	564	45	1	32-148/30
98-82-8	Isopropylbenzene	14.1		1250	1580	125	1480	117	7	70-130/30
99-87-6	p-Isopropyltoluene	ND		1250	1440	115	1330	106	8	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		1250	1090	87	1020	82	7	54-144/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		1250	723	58	695	56	4	53-151/30
74-95-3	Methylene bromide	ND		1250	1210	97	1140	91	6	73-136/30
75-09-2	Methylene chloride	ND		1250	1560	125	1420	114	9	64-140/30
91-20-3	Naphthalene	88.5		1250	828	59	849	61	3	48-143/30
103-65-1	n-Propylbenzene	27.9		1250	1550	122	1450	114	7	65-136/30
100-42-5	Styrene	ND		1250	1430	114	1310	105	9	61-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		1250	1390	111	1290	103	7	78-128/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		1250	914	73	889	71	3	60-150/30
127-18-4	Tetrachloroethene	ND		1250	1360	109	1260	101	8	70-130/30
109-99-9	Tetrahydrofuran	ND		1250	871	70	811	65	7	40-150/30
108-88-3	Toluene	985		1250	2440	116	2250	101	8	66-134/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		1250	771	62	751	60	3	20-150/30
87-61-6	1,2,3-Trichlorobenzene	ND		1250	969	78	977	78	1	57-127/30
120-82-1	1,2,4-Trichlorobenzene	ND		1250	1110	89	1090	87	2	57-130/30
71-55-6	1,1,1-Trichloroethane	ND		1250	1600	128	1450	116	10	62-153/30
79-00-5	1,1,2-Trichloroethane	ND		1250	1190	95	1120	90	6	77-127/30
79-01-6	Trichloroethene	ND		1250	1510	121	1380	110	9	66-132/30
75-69-4	Trichlorofluoromethane	ND		1250	1470	118	1310	105	12	48-161/30
96-18-4	1,2,3-Trichloropropane	ND		1250	878	70	860	69	2	61-138/30
95-63-6	1,2,4-Trimethylbenzene	382		1250	1840	117	1700	105	8	54-143/30
108-67-8	1,3,5-Trimethylbenzene	114		1250	1600	119	1500	111	6	62-139/30
75-01-4	Vinyl chloride	ND		1250	1990	159* a	1740	139	13	38-150/30
	m,p-Xylene	1510		2500	4340	113	3960	98	9	55-142/30
95-47-6	o-Xylene	721		1250	2160	115	1970	100	9	65-136/30



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Job Number: M81183

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Matrix Spike/Matrix Spike Duplicate Summary

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81235-6MS	N33222.D	25	03/19/09	RT	n/a	n/a	MSN1227
M81235-6MSD	N33223.D	25	03/19/09	RT	n/a	n/a	MSN1227
M81235-6	N33221.D	25	03/19/09	RT	n/a	n/a	MSN1227

The QC reported here applies to the following samples: **Method:** SW846 8260B

M81183-5, M81183-7, M81183-9

CAS No.	Surrogate Recoveries	MS	MSD	M81235-6	Limits
1868-53-7	Dibromofluoromethane	105%	103%	101%	79-130%
2037-26-5	Toluene-D8	100%	101%	99%	80-120%
460-00-4	4-Bromofluorobenzene	102%	104%	107%	80-120%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.





Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

M81183 Job Number:

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81235-6MS	N33241.D	5	03/20/09	RT	n/a	n/a	MSN1228
M81235-6MSD	N33242.D	5	03/20/09	RT	n/a	n/a	MSN1228
M81235-6	N33240.D	5	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

M81183-20

67-64-1 Acetone	CAS No.	Compound	M81235-6 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-13-1 Acrylonitrile	67-64-1	Acetone	ND		250	388	155* a	329	132	16	20-150/30
T1-43-2 Benzene 14.7 250 304 116 264 100 14 70-130/30 108-86-1 Bromobenzene ND 250 263 105 230 92 13 71-121/30 75-27-4 Bromodichloromethane ND 250 301 120 264 106 13 64-144/30 75-25-2 Bromoform ND 250 215 86 199 80 8 57-133/30 74-83-9 Bromomethane ND 250 272 109 246 98 10 40-146/30 78-93-3 2-Butanone (MEK) ND 250 218 87 183 73 17 34-150/30 104-51-8 n-Butylbenzene ND 250 228 711 243 93 17 61-142/30 135-98-8 sec-Butylbenzene ND 250 295 118 253 101 15 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 108-90-7 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 108-90-7 Chlorobenzene ND 250 297 119 245 98 19 46-169/30 67-66-3 Chlorothane ND 250 291 116 250 100 15 70-141/30 95-49-8 o-Chlorotoluene ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 233 93 202 81 14 33-150/30 106-93-4 p-Chlorotoluene ND 250 226 100 248 99 11 70-130/30 106-93-4 1,2-Dibromo-3-chloropropane ND 250 226 100 221 88 12 65-138/30 95-50-1 1,2-Dibromochloromethane ND 250 260 104 227 91 14 70-130/30 75-34-4 1,1-Dichlorobenzene ND 250 275 110 237 95 15 60-138/30 75-33-4 1,1-Dichlorobenzene ND 250 275 110 237 95 15 60-133/30 156-69-2 cis-1,2-Dichlorobenee ND 250 299 110 237 95 15 60-133/30 156-69-2 cis-1,2-Dichloroethene ND 250 299 110 237 95 15 60-133/30 156-69-2 cis-1,2-Dichloroethene ND 250 299 110 246 98 17 64-130/30 142-28-9 1,3-Dichlorobenzene ND 250 299 110 250 102 15 70-130/30 142-28-9 1,3-Dichlorobenzene ND 250 255 102 256 102 15 70-130/30 142-28-9 1,3	107-13-1	Acrylonitrile	ND		1250				91		
108-86-1 Bromobenzene ND 250 263 105 230 92 13 71-121/30 75-27-4 Bromodichloromethane ND 250 301 120 264 106 13 64-144/30 75-25-2 Bromoform ND 250 215 86 199 80 8 57-133/30 74-83-9 Bromomethane ND 250 272 109 246 98 10 40-146/30 78-93-3 2-Butanone (MEK) ND 250 218 87 183 73 17 34-150/30 104-51-8 n-Butylbenzene 10.2 250 287 111 243 93 17 61-142/30 135-98-8 sec-Butylbenzene ND 250 295 118 253 101 15 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chloromethane ND 250 233 30 202 81 14 33-150/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 106-93-4 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 106-93-4 1,2-Dibromo-3-chloropropane ND 250 260 104 223 89 15 70-124/30 75-35-4 1,1-Dichlorobenzene ND 250 273 109 231 92 17 10-150/30 75-33-4 1,1-Dichlorobenzene ND 250 275 110 237 95 15 60-153/30 156-69-2 cis-1,2-Dichloroethane ND 250 292 117 246 98 17 64-130/30 156-69-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-69-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-69-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 142-28-9 1,3-Dichloroethene ND 250 255 102 255 102 255 102 15 70-130/30 142-28-9 1,3-Dichloroethene ND 250 255 102 255 102 15 70-130/30 142-28-9 1,3-Dichloroethene ND 250 255	71-43-2	•	14.7					264	100	14	
75-27-4 Bromodichloromethane ND 250 301 120 264 106 13 64-144/30 75-25-2 Bromoform ND 250 215 86 199 80 8 57-133/30 74-83-9 Bromomethane ND 250 272 109 246 98 10 40-146/30 78-93-3 2-Butanone (MEK) ND 250 218 87 183 73 17 34-150/30 104-51-8 n-Butylbenzene 10.2 250 287 111 243 93 17 61-142/30 135-98-8 sec-Butylbenzene ND 250 295 118 253 101 15 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 56-23-5 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 75-00-3 Chloroben											
74-83-9 Bromomethane ND 250 272 109 246 98 10 40-146/30 78-93-3 2-Butanone (MEK) ND 250 218 87 183 73 17 34-150/30 104-51-8 n-Butylbenzene 10.2 250 287 111 243 93 17 61-142/30 135-98-8 sec-Butylbenzene ND 250 298 119 255 102 16 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 297 119 245 98 19 46-169/30 67-66-3 Ch									106		
74-83-9 Bromomethane ND 250 272 109 246 98 10 40-146/30 78-93-3 2-Butanone (MEK) ND 250 218 87 183 73 17 34-150/30 104-51-8 n-Butylbenzene 10.2 250 287 111 243 93 17 61-142/30 135-98-8 sec-Butylbenzene ND 250 298 119 255 102 16 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 297 119 245 98 19 46-169/30 67-66-3 Ch	75-25-2	Bromoform	ND		250	215	86	199	80	8	57-133/30
104-51-8 n-Butylbenzene 10.2 250 287 111 243 93 17 61-142/30 135-98-8 sec-Butylbenzene ND 250 295 118 253 101 15 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 75-00-3 Chloroform ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroforme ND 250 291 116 250 100 15 70-141/30 74-87-3 Chlorot	74-83-9	Bromomethane	ND		250	272	109	246	98	10	40-146/30
135-98-8 sec-Butylbenzene ND 250 295 118 253 101 15 70-130/30 98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 75-00-3 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 75-00-3 Chlorothane ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chloromethane ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 233 93 202 81 14 33-150/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 286 114 249 100 14 70-130/30 106-93-4 1,2-Dibromo-3-chloropropane ND 250 266 90 204 82 10 47-156/30 106-93-4 1,2-Dibromoethane ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 75-34-3 1,1-Dichlorobenzene ND 250 275 110 237 95 15 60-153/30 75-34-3 1,1-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 156-69-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-69-2 cis-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 142-28-9 1,3-Dichloroptopane ND 250 255 102 242 97 15 73-130/30 142-28-9 1,3-Dichloroptopane ND 250 255 102 223 89 13 75-127/30 142-28-9 1,3-Dichloroptopane ND 250 255 102 223 89 13 75-127/30 142-28-9 1,3-Dichloroptopane ND 250 255 102 223 89 13 75-127/30 142-28-9 1,3-Dichloroptopane ND 250 255 102 223 89 13 75-127/30 142-28-9 1,3-Dichloroptopane ND 250 255 102 22	78-93-3	2-Butanone (MEK)	ND		250	218	87	183	73	17	34-150/30
98-06-6 tert-Butylbenzene ND 250 298 119 255 102 16 70-137/30 75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 75-00-3 Chlorothane ND 250 297 119 245 98 19 46-169/30 67-66-3 Chlorotoform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chlorotoluene ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 106-43-4 p-Chlorotol	104-51-8	n-Butylbenzene	10.2		250	287	111	243	93	17	61-142/30
75-15-0 Carbon disulfide ND 250 318 127 272 109 16 42-151/30 56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 75-00-3 Chloroferm ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroform ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 233 93 202 81 14 33-150/30 96-12-8 1,2-Dibromocal-chloropropane ND 250 286 114 249 100 14 70-130/30 124-48-1 Dibromochloromethane ND 250 226 90 204 82 10 47-156/30 124-48-1 <td< td=""><td>135-98-8</td><td>sec-Butylbenzene</td><td>ND</td><td></td><td>250</td><td>295</td><td>118</td><td>253</td><td>101</td><td>15</td><td>70-130/30</td></td<>	135-98-8	sec-Butylbenzene	ND		250	295	118	253	101	15	70-130/30
56-23-5 Carbon tetrachloride ND 250 302 121 261 104 15 56-158/30 108-90-7 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 75-00-3 Chlorofemane ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chlorotoluene ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 317 127 270 108 16 59-147/30 106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 106-93-4 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 15-50-1 1,2-	98-06-6	tert-Butylbenzene	ND		250	298	119	255	102	16	70-137/30
108-90-7 Chlorobenzene ND 250 263 105 230 92 13 72-122/30 75-00-3 Chloroethane ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chlorotoluene ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 317 127 270 108 16 59-147/30 106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 226 90 204 82 10 47-156/30 106-93-4 1,2-D	75-15-0	Carbon disulfide	ND		250	318	127	272	109	16	42-151/30
75-00-3 Chloroethane ND 250 297 119 245 98 19 46-169/30 67-66-3 Chloroform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chloromethane ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 317 127 270 108 16 59-147/30 106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 55-50-1 <td< td=""><td>56-23-5</td><td>Carbon tetrachloride</td><td>ND</td><td></td><td>250</td><td>302</td><td>121</td><td>261</td><td>104</td><td>15</td><td>56-158/30</td></td<>	56-23-5	Carbon tetrachloride	ND		250	302	121	261	104	15	56-158/30
67-66-3 Chloroform ND 250 291 116 250 100 15 70-141/30 74-87-3 Chloromethane ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 317 127 270 108 16 59-147/30 106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dichlorobenzene ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1	108-90-7	Chlorobenzene	ND		250	263	105	230	92	13	72-122/30
74-87-3 Chloromethane ND 250 233 93 202 81 14 33-150/30 95-49-8 o-Chlorotoluene ND 250 317 127 270 108 16 59-147/30 106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dibromoethane ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 </td <td>75-00-3</td> <td>Chloroethane</td> <td>ND</td> <td></td> <td>250</td> <td>297</td> <td>119</td> <td>245</td> <td>98</td> <td>19</td> <td>46-169/30</td>	75-00-3	Chloroethane	ND		250	297	119	245	98	19	46-169/30
95-49-8 o-Chlorotoluene ND 250 317 127 270 108 16 59-147/30 106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dibromoethane ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorodethane ND 250 273 109 231 92 17 10-150/30 75	67-66-3	Chloroform	ND		250	291	116	250	100	15	70-141/30
106-43-4 p-Chlorotoluene ND 250 286 114 249 100 14 70-130/30 96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dibromoethane ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30	74-87-3	Chloromethane	ND		250	233	93	202	81	14	33-150/30
96-12-8 1,2-Dibromo-3-chloropropane ND 250 226 90 204 82 10 47-156/30 124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dibromoethane ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-34-3 1,1-Dichloroethane ND 250 273 109 231 92 17 10-150/30 75-35-4 1,1-Dichloroethene ND 250 275 110 237 95 15 60-153/30 <td< td=""><td>95-49-8</td><td>o-Chlorotoluene</td><td>ND</td><td></td><td>250</td><td>317</td><td>127</td><td>270</td><td>108</td><td>16</td><td>59-147/30</td></td<>	95-49-8	o-Chlorotoluene	ND		250	317	127	270	108	16	59-147/30
124-48-1 Dibromochloromethane ND 250 276 110 248 99 11 70-130/30 106-93-4 1,2-Dibromoethane ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30 75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 7	106-43-4	p-Chlorotoluene	ND		250	286	114	249	100	14	70-130/30
106-93-4 1,2-Dibromoethane ND 250 249 100 221 88 12 65-138/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30 75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-	96-12-8	1,2-Dibromo-3-chloropropane	ND		250	226	90	204	82	10	47-156/30
95-50-1 1,2-Dichlorobenzene ND 250 262 105 226 90 15 72-123/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30 75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 <t< td=""><td>124-48-1</td><td>Dibromochloromethane</td><td>ND</td><td></td><td>250</td><td>276</td><td>110</td><td>248</td><td>99</td><td>11</td><td>70-130/30</td></t<>	124-48-1	Dibromochloromethane	ND		250	276	110	248	99	11	70-130/30
541-73-1 1,3-Dichlorobenzene ND 250 260 104 227 91 14 70-124/30 106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30 75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30	106-93-4	1,2-Dibromoethane	ND		250	249	100	221	88	12	65-138/30
106-46-7 1,4-Dichlorobenzene ND 250 260 104 223 89 15 70-124/30 75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30 75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30	95-50-1	1,2-Dichlorobenzene	ND		250	262	105		90	15	72-123/30
75-71-8 Dichlorodifluoromethane ND 250 273 109 231 92 17 10-150/30 75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30	541-73-1	1,3-Dichlorobenzene	ND			260	104				70-124/30
75-34-3 1,1-Dichloroethane ND 250 291 116 247 99 16 70-141/30 107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30	106-46-7	1,4-Dichlorobenzene	ND				104				70-124/30
107-06-2 1,2-Dichloroethane ND 250 275 110 237 95 15 60-153/30 75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30	75-71-8	Dichlorodifluoromethane	ND		250	273	109	231	92	17	10-150/30
75-35-4 1,1-Dichloroethene ND 250 300 120 255 102 16 63-134/30 156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30							116				
156-59-2 cis-1,2-Dichloroethene ND 250 292 117 246 98 17 64-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30	107-06-2	1,2-Dichloroethane	ND				110		95	15	60-153/30
156-60-5 trans-1,2-Dichloroethene ND 250 299 120 256 102 15 70-130/30 78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30	75-35-4	1,1-Dichloroethene	ND				120		102	16	63-134/30
78-87-5 1,2-Dichloropropane ND 250 280 112 242 97 15 73-130/30 142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30											64-130/30
142-28-9 1,3-Dichloropropane ND 250 255 102 223 89 13 75-127/30			ND						102		
'											
#04.00 # 0.0 P1.11											
	594-20-7	2,2-Dichloropropane	ND		250	259	104	222	89	15	30-150/30
563-58-6 1,1-Dichloropropene ND 250 289 116 251 100 14 73-134/30											
10061-01-5 cis-1,3-Dichloropropene ND 250 259 104 223 89 15 58-142/30	10061-01-5	cis-1,3-Dichloropropene	ND		250	259	104	223	89	15	58-142/30



Page 2 of 3

Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81235-6MS	N33241.D	5	03/20/09	RT	n/a	n/a	MSN1228
M81235-6MSD	N33242.D	5	03/20/09	RT	n/a	n/a	MSN1228
M81235-6	N33240.D	5	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

M81183-20

CAS No.	Compound	M81235 ug/l	-6 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	247	99	218	87	12	53-143/30
100-41-4	Ethylbenzene	178		250	453	110	397	88	13	60-138/30
76-13-1	Freon 113	ND		250	327	131	278	111	16	60-149/30
87-68-3	Hexachlorobutadiene	ND		250	254	102	219	88	15	54-135/30
591-78-6	2-Hexanone	ND		250	204	82	190	76	7	32-148/30
98-82-8	Isopropylbenzene	7.9		250	306	119	265	103	14	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	290	116	247	99	16	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	275	110	242	97	13	54-144/30
108-10-1	4-Methyl-2-pentanone (MIBK)			250	247	99	223	89	10	53-151/30
74-95-3	Methylene bromide	ND		250	261	104	229	92	13	73-136/30
75-09-2	Methylene chloride	ND		250	298	119	255	102	16	64-140/30
91-20-3	Naphthalene	33.6		250	267	93	240	83	11	48-143/30
103-65-1	n-Propylbenzene	16.0		250	316	120	270	102	16	65-136/30
100-42-5	Styrene	ND		250	280	112	246	98	13	61-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	267	107	234	94	13	78-128/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	252	101	221	88	13	60-150/30
127-18-4	Tetrachloroethene	ND		250	261	104	228	91	13	70-130/30
109-99-9	Tetrahydrofuran	ND		250	300	120	265	106	12	40-150/30
108-88-3	Toluene	780		250	1110	132	957	71	15	66-134/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	244	98	220	88	10	20-150/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	244	98	218	87	11	57-127/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	247	99	219	88	12	57-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	308	123	262	105	16	62-153/30
79-00-5	1,1,2-Trichloroethane	ND		250	270	108	240	96	12	77-127/30
79-01-6	Trichloroethene	ND		250	292	117	247	99	17	66-132/30
75-69-4	Trichlorofluoromethane	ND		250	281	112	241	96	15	48-161/30
96-18-4	1,2,3-Trichloropropane	ND		250	250	100	222	89	12	61-138/30
95-63-6	1,2,4-Trimethylbenzene	277		250	590	125	504	91	16	54-143/30
108-67-8	1,3,5-Trimethylbenzene	92.4		250	386	117	334	97	14	62-139/30
75-01-4	Vinyl chloride	ND		250	304	122	256	102	17	38-150/30
	m,p-Xylene	1200		500	1750	110	1520	64	14	55-142/30
95-47-6	o-Xylene	600		250	898	119	779	72	14	65-136/30



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Method: SW846 8260B

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M81235-6MS	N33241.D	5	03/20/09	RT	n/a	n/a	MSN1228
M81235-6MSD	N33242.D	5	03/20/09	RT	n/a	n/a	MSN1228
M81235-6	N33240.D	5	03/20/09	RT	n/a	n/a	MSN1228

The QC reported here applies to the following samples:

M81183-20

CAS No.	Surrogate Recoveries	MS	MSD	M81235-6	Limits
1868-53-7 2037-26-5	Dibromofluoromethane Toluene-D8	104% 101%	104% 101%	104% 100%	79-130% 80-120%
460-00-4	4-Bromofluorobenzene	102%	103%	103%	80-120%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.



Volatile Internal Standard Area Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Injection Date: 03/19/09 Check Std: MSG3590-CC3531 Lab File ID: **Injection Time:** 10:04 G88870.D

Instrument ID: GCMSG Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	192832	9.05	281591	9.92	151959	13.17	122674	15.73	69052	6.65
Upper Limit ^a	385664	9.55	563182	10.42	303918	13.67	245348	16.23	138104	7.15
Lower Limit ^b	96416	8.55	140796	9.42	75980	12.67	61337	15.23	34526	6.15
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSG3590-BS	192832	9.05	281591	9.92	151959	13.17	122674	15.73	69052	6.65
MSG3590-BSD	189155	9.05	273815	9.92	147270	13.17	120681	15.73	70872	6.65
MSG3590-MB	190472	9.06	276830	9.92	138823	13.18	95634	15.73	66516	6.67
M81183-13	185956	9.05	271158	9.92	136319	13.17	88248	15.74	54904	6.67
M81183-15	183761	9.05	268402	9.92	134495	13.18	86051	15.74	58361	6.66
M81183-16	182142	9.05	270349	9.92	136439	13.18	86914	15.74	59435	6.67
M81183-18	176675	9.05	257467	9.92	129169	13.18	81260	15.74	60622	6.67
ZZZZZZ	177942	9.05	260005	9.92	130876	13.18	82858	15.74	63444	6.67
ZZZZZZ	175520	9.05	258282	9.92	128714	13.17	82037	15.74	62435	6.67
ZZZZZZ	175322	9.06	256657	9.92	129729		82182		62581	6.67
ZZZZZZ	173656	9.05	256470	9.93	129871		83045	15.73		6.67
ZZZZZZ	173626	9.05	256455	9.92	129655	13.17	80856		62919	6.68
ZZZZZZ	169369	9.05	251590	9.92	126371	13.17	78168	15.74		6.67
M81205-7	167672	9.05	247808	9.93	124179	13.18	77785		63353	6.67
ZZZZZZ	167258	9.06	249235	9.92	129168	13.18		15.74	72278	6.66
ZZZZZZ	173217	9.06	252857	9.92	130432	13.17	99076	15.73	72027	6.67
ZZZZZZ	179699	9.05	263011	9.93	132492	13.18	84999	15.74	66553	6.67
ZZZZZZ	178955	9.05	263422	9.92	132141	13.17	84017	15.74	65552	6.67
ZZZZZZ	176748	9.05	261960	9.92	132047	13.17	83388	15.74	65971	6.67
ZZZZZZ	176258	9.05	262937	9.92	131581	13.17	81026		65980	6.67
ZZZZZZ	172645	9.05	255148	9.92	128443	13.18	81234		64336	6.67
ZZZZZZ	173421	9.05	255847	9.92	126701	13.18	82242		63220	6.67
M81205-7MS	171769	9.05	255857	9.92	139213	13.17	118039	15.73		6.66
M81205-7MSD	177350	9.05	258254	9.92	139871	13.17	114101	15.73	59537	6.65

IS 1 = Pentafluorobenzene IS 2 = 1,4-Difluorobenzene = Chlorobenzene-D5 IS 3 IS 4 = 1,4-Dichlorobenzene-d4 IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Internal Standard Area Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Check Std:MSN1225-CC1202Injection Date:03/17/09Lab File ID:N33140.DInjection Time:13:40

Instrument ID: GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	301953 603906 150977	8.64 9.14 8.14	492046 984092 246023	9.50 10.00 9.00	259760 519520 129880	12.76 13.26 12.26	226853 453706 113427	15.31 15.81 14.81	126950 253900 63475	6.22 6.72 5.72
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN1225-BS MSN1225-BSD MSN1225-MB ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	301953 268128 310673 304014 263975 290687 245808 297213 253567 304742 267259 260803 244260 250156 294256	8.64 8.64 8.64 8.64 8.64 8.64 8.64 8.64	492046 444065 507037 500606 436215 473313 411176 488152 415168 492782 438771 431778 412010 414397 487018	9.50 9.51 9.50 9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.50 9.51 9.50	259760 233969 258290 256964 225293 244488 211622 255269 217757 253710 226486 222271 210661 215331 251716	12.75 12.75 12.75 12.75 12.75 12.76 12.76 12.76 12.75 12.75 12.75 12.75 12.75	226853 203490 220258 221570 191319 204252 177499 228891 199453 229026 190282 184360 175545 193555 213453	15.31 15.32 15.32 15.32 15.32 15.32 15.31 15.32 15.31 15.32 15.31 15.31 15.31	124976 140637 129349 111742 124628 106786 126546 114825 123652 117905 113114 109953 103373 82959	6.22 6.22 6.22 6.22 6.22 6.22 6.22 6.22
ZZZZZZ ZZZZZZ M81180-15 M81180-15MS M81180-15MSD	251922 254666 300573 314487 297317	8.64 8.64 8.64 8.64 8.64	424324 426763 496576 519351 486952	9.50 9.50 9.50 9.50 9.50	220983 216876 255592 274429 256408	12.76 12.76 12.75 12.76 12.75	195034 186007 220528 239223 221347	15.31 15.31 15.31 15.31 15.31	56927* 59143*	6.22 6.22 6.22 6.22 6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Internal Standard Area Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Check Std:MSN1226-CC1202Injection Date:03/18/09Lab File ID:N33174.DInjection Time:13:40

Instrument ID: GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	292328 584656 146164	8.64 9.14 8.14	479093 958186 239547	9.51 10.01 9.01	251636 503272 125818	12.75 13.25 12.25	221595 443190 110798	15.31 15.81 14.81	133042 266084 66521	6.22 6.72 5.72
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN1226-BS MSN1226-BSD MSN1226-MB ZZZZZZ ZZZZZZ M81180-14 M81180-14MS M81180-14MSD ZZZZZZZ	292328 319539 270991 299708 261322 272189 273054 317745 287418 278030	8.64 8.64 8.64 8.64 8.64 8.64 8.65 8.65	479093 524620 449329 495930 427430 450583 452799 513947 478517 452653	9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.51	251636 273591 229549 253538 222906 237370 244009 275585 240090 230858	12.75 12.75 12.75 12.75 12.76 12.75 12.75 12.76 12.75 12.76	221595 243927 196072 217452 191572 219223 220553 247068 218943 212576	15.31 15.32 15.32 15.32 15.32 15.32 15.32 15.32 15.32	133042 137632 114767 140650 115565 116211 123420 136252 158274 130980	6.22 6.22 6.22 6.22 6.22 6.22 6.22 6.22
M81183-11 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	307064 286528 285853 302577 258984 316425 308022 251291	8.64 8.64 8.64 8.64 8.64 8.64 8.64	500733 468652 469894 500156 426685 513239 501643 419013	9.51 9.51 9.51 9.50 9.51 9.50 9.50	253525 240556 238481 254370 222440 263692 255726 215192	12.75 12.76 12.75 12.76 12.75 12.75 12.76 12.76	197981 232952 214125	15.32 15.31 15.32 15.31 15.31 15.32 15.31	138737 99819 95067 95997 76454 85507 90679 68439	6.22 6.22 6.22 6.22 6.22 6.22 6.22 6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Internal Standard Area Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Check Std:MSN1227-CC1202Injection Date:03/19/09Lab File ID:N33202.DInjection Time:13:52

Instrument ID: GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	305347	8.65	494988	9.51	260199	12.76	227999	15.31	148444	6.22
Upper Limit ^a	610694	9.15	989976	10.01	520398	13.26	455998	15.81	296888	6.72
Lower Limit b	152674	8.15	247494	9.01	130100	12.26	114000	14.81	74222	5.72
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSN1227-BS	305347	8.65	494988	9.51	260199	12.76	227999	15.31	148444	6.22
MSN1227-BSD	302317	8.64	496363	9.51	262504	12.76	230066	15.32	136482	6.22
MSN1227-MB	272059	8.64	448972	9.51	229997	12.75	193176	15.32	126085	6.22
M81183-5	286543	8.64	472024	9.51	242413	12.76	204512	15.32		6.22
M81183-7	233097	8.64	390842	9.50	201655	12.75	166559	15.32	105004	6.22
M81183-9	231004	8.64	385128	9.51	199532	12.75	164781	15.32	118512	6.22
ZZZZZZ	230837	8.65	387778	9.51	201258	12.76	168189	15.32	113043	6.22
ZZZZZZ	273526	8.65	459109	9.50	239984	12.75	208771	15.31	132583	6.22
ZZZZZZ	280377	8.64	464751	9.51	241298	12.75	212932	15.32	137947	6.22
ZZZZZZ	301039	8.64	501980	9.51	273171	12.76	257995	15.32	172375	6.22
ZZZZZZ	315126	8.64	510626	9.51	261555	12.76	227897	15.31	149789	6.22
ZZZZZZ	292215	8.64	482289	9.50	249188	12.75	221927	15.31	56682*	6.22
M81235-6	254782	8.64	420161	9.51	212818	12.76	176210	15.31	45130*	6.22
M81235-6MS	254109	8.64	428315	9.50	226899	12.76	194065	15.31	46565*	6.22
M81235-6MSD	273467	8.64	455366	9.50	242618	12.76	201645	15.31	50753*	6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Internal Standard Area Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

 Check Std:
 MSN1228-CC1202
 Injection Date:
 03/20/09

 Lab File ID:
 N33228.D
 Injection Time:
 11:20

Instrument ID: GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	281770 563540 140885	8.64 9.14 8.14	460168 920336 230084	9.51 10.01 9.01	252305 504610 126153	12.75 13.25 12.25	218341 436682 109171	15.31 15.81 14.81		6.22 6.72 5.72
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN1228-BS MSN1228-BSD MSN1228-MB M81183-20 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	262537 257911 281941 238422 238326 282982 233920 234933 232849 244851 282451 253915 294949 291045	8.64 8.64 8.64 8.64 8.64 8.64 8.64 8.64	435715 427655 475577 398425 400599 472765 390199 395381 395691 410566 466894 422668 484913 478582	9.50 9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.51 9.51	232613 227285 243257 204985 207950 241865 201263 203144 205439 214645 242026 227391 259521 246375	12.76 12.76 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.76 12.75 12.75 12.75	194806 203917 171471 182925 205054 167605 170049 170847 188164 212243 196203 225964	15.31 15.32 15.32 15.31 15.32 15.31 15.32 15.31 15.31 15.31 15.31 15.31	116220 112879 120201 134097 118758 134136	6.22 6.22 6.22 6.22 6.22 6.22 6.22 6.22
ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZ	236001 238270 232295 278263 242922 231977	8.64 8.64 8.64 8.64 8.64 8.64	397443 396195 391384 463672 407341 393657	9.51 9.51 9.51 9.51 9.51 9.51	202958 204083 204847 238736 211989 204807	12.76 12.75 12.75 12.76 12.76 12.76	165861 168333 175440 198470 180924	15.32 15.32 15.32 15.31 15.32	116862	6.22 6.22 6.22 6.22 6.22 6.22 6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Surrogate Recovery Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
M81183-1	N33153.D	103.0	98.0	106.0
M81183-3	N33154.D	103.0	99.0	106.0
M81183-5	N33206.D	102.0	100.0	104.0
M81183-7	N33207.D	104.0	100.0	106.0
M81183-9	N33208.D	104.0	99.0	106.0
M81183-11	N33188.D	100.0	99.0	105.0
M81183-13	G88874.D	103.0	99.0	113.0
M81183-15	G88875.D	102.0	99.0	115.0
M81183-16	G88876.D	105.0	100.0	114.0
M81183-18	G88877.D	102.0	96.0	114.0
M81183-20	N33233.D	104.0	100.0	106.0
M81180-14MS	N33181.D	104.0	100.0	99.0
M81180-14MSD	N33182.D	99.0	100.0	100.0
M81180-15MS	N33160.D	102.0	100.0	101.0
M81180-15MSD	N33161.D	102.0	101.0	102.0
M81205-7MS	G88893.D	104.0	100.0	95.0
M81205-7MSD	G88894.D	102.0	101.0	96.0
M81235-6MS	N33222.D	105.0	100.0	102.0
M81235-6MS	N33241.D	104.0	101.0	102.0
M81235-6MSD	N33223.D	103.0	101.0	104.0
M81235-6MSD	N33242.D	104.0	101.0	103.0
MSG3590-BS	G88870A.D	102.0	101.0	99.0
MSG3590-BSD	G88871.D	101.0	101.0	97.0
MSG3590-MB	G88873.D	101.0	99.0	110.0
MSN1225-BS	N33140.D	101.0	100.0	101.0
MSN1225-BSD	N33141.D	103.0	100.0	102.0
MSN1225-MB	N33143.D	100.0	99.0	105.0
MSN1226-BS	N33174.D	102.0	100.0	101.0
MSN1226-BSD	N33175.D	101.0	100.0	100.0
MSN1226-MB	N33177.D	103.0	98.0	103.0
MSN1227-BS	N33202.D	101.0	100.0	101.0
MSN1227-BSD	N33203.D	102.0	100.0	101.0
MSN1227-MB	N33205.D	102.0	99.0	105.0
MSN1228-BS	N33229.D	105.0	100.0	102.0
MSN1228-BSD	N33230.D	104.0	101.0	104.0
MSN1228-MB	N33232.D	104.0	99.0	106.0

Surrogate Recovery Compounds Limits



5.1

Volatile Surrogate Recovery Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Surrogate Recovery Compounds Limits

 S1 = Dibromofluoromethane
 79-130%

 S2 = Toluene-D8
 80-120%

 S3 = 4-Bromofluorobenzene
 80-120%





GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



Method: CT-ETPH

Method Blank Summary Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18047-MB	File ID BC25801D.	DF D1	Analyzed 03/17/09	By DG	Prep Date 03/11/09	Prep Batch OP18047	Analytical Batch GBC1422

The QC reported here applies to the following samples:

M81183-1, M81183-3, M81183-5, M81183-7, M81183-9, M81183-11, M81183-13, M81183-16, M81183-18, M81183-20

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 72% 50-149%



Method: SW846 8082

Method Blank Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18048-MB	File ID BE15056.D	DF 1	Analyzed 03/13/09	By SL	Prep Date 03/11/09	Prep Batch OP18048	Analytical Batch GBE1057

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	109%	32-149%
877-09-8	Tetrachloro-m-xylene	116%	32-149%
2051-24-3	Decachlorobiphenyl	85%	30-150%
2051-24-3	Decachlorobiphenyl	76%	30-150%



Method: CT-ETPH

Blank Spike Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18047-BS	File ID DF BC25802A.D1	Analyzed 03/17/09	By DG	Prep Date 03/11/09	Prep Batch OP18047	Analytical Batch GBC1422

The QC reported here applies to the following samples:

M81183-1, M81183-3, M81183-5, M81183-7, M81183-9, M81183-11, M81183-13, M81183-16, M81183-18, M81183-20

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.552	79	60-120

CAS No. Surrogate Recoveries BSP Limits
3386-33-2 1-Chlorooctadecane 79% 50-149%



Method: SW846 8082

Blank Spike Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18048-BS	File ID BE15057.D	DF 1	Analyzed 03/13/09	By SL	Prep Date 03/11/09	Prep Batch OP18048	Analytical Batch GBE1057

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.2	110	55-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	2.2	110	61-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	113%	32-149%
877-09-8	Tetrachloro-m-xylene	120%	32-149%
2051-24-3	Decachlorobiphenyl	92%	30-150%
2051-24-3	Decachlorobiphenyl	82%	30-150%



Method: CT-ETPH

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18047-MS	BC25803A.D1	03/17/09	DG	03/11/09	OP18047	GBC1422
OP18047-MSD	BC25804A.D1	03/17/09	DG	03/11/09	OP18047	GBC1422
M81179-6	BC25805A.D1	03/17/09	DG	03/11/09	OP18047	GBC1422

The QC reported here applies to the following samples:

CAS No.	Compound	M81179-6 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.626	89	0.634	91	1	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	М8	1179-6	Limits			
3386-33-2	1-Chlorooctadecane	77%	80%	78%	6	50-149%	ó		



Method: SW846 8082

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
OP18048-MS	BE15058.D	1	03/13/09	SL	03/11/09	OP18048	GBE1057
OP18048-MSD	BE15059.D	1	03/13/09	SL	03/11/09	OP18048	GBE1057
M81179-7	BE15060.D	1	03/13/09	SL	03/11/09	OP18048	GBE1057

The QC reported here applies to the following samples:

CAS No.	Compound	M81179-7 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 A	Aroclor 1016	ND	2	2.3	115	2.3	115	0	53-140/36
11104-28-2 A	Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 A	Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 A	Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 A	Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 A	Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 A	Aroclor 1260	ND	2	2.2	110	2.3	115	4	54-140/27
37324-23-5 A	Aroclor 1262	ND		ND		ND		nc	40-140/20
11100-14-4 A	Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	M81179-7	Limits
877-09-8	Tetrachloro-m-xylene	105%	108%	108%	32-149%
877-09-8	Tetrachloro-m-xylene	115%	120%	120%	32-149%
2051-24-3	Decachlorobiphenyl	92%	102%	101%	30-150%
2051-24-3	Decachlorobiphenyl	77%	90%	88%	30-150%



Semivolatile Surrogate Recovery Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab	
Sample ID	File ID	S1 a
M01102 1	DC250144 D	00.0
M81183-1	BC25814A.D	90.0
M81183-3	BC25815A.D	83.0
M81183-5	BC25816A.D	87.0
M81183-7	BC25817A.D	78.0
M81183-9	BC25818A.D	79.0
M81183-11	BC25819A.D	89.0
M81183-13	BC25820A.D	75.0
M81183-16	BC25822A.D	101.0
M81183-18	BC25823A.D	84.0
M81183-20	BC25824A.D	88.0
OP18047-BS	BC25802A.D	79.0
OP18047-MB	BC25801D.D	72.0
OP18047-MS	BC25803A.D	77.0
OP18047-MSD	BC25804A.D	80.0

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



G

Semivolatile Surrogate Recovery Summary

Job Number: M81183

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8082 Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab				
Sample ID	File ID	S1 a	S1 b	S2 a	S2 b
M81183-1	BE15062.D	110.0	120.0	126.0	124.0
M81183-3	BE15063.D	103.0	107.0	116.0	107.0
M81183-5	BE15064.D	107.0	117.0	122.0	117.0
M81183-7	BE15065.D	106.0	115.0	110.0	85.0
M81183-9	BE15067.D	101.0	111.0	94.0	85.0
M81183-11	BE15068.D	109.0	114.0	119.0	118.0
M81183-13	BE15069.D	102.0	111.0	91.0	80.0
M81183-16	BE15070.D	109.0	115.0	124.0	119.0
M81183-18	BE15071.D	110.0	117.0	113.0	110.0
M81183-20	BE15072.D	108.0	116.0	107.0	104.0
OP18048-BS	BE15057.D	113.0	120.0	92.0	82.0
OP18048-MB	BE15056.D	109.0	116.0	85.0	76.0
OP18048-MS	BE15058.D	105.0	115.0	92.0	77.0
OP18048-MSD	BE15059.D	108.0	120.0	102.0	90.0

Surrogate Compounds

Recovery Limits

S1 = Tetrachloro-m-xylene 32-149% S2 = Decachlorobiphenyl 30-150%

- (a) Recovery from GC signal #1
- (b) Recovery from GC signal #2





Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M81183 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

03/11/09

Units: ug/l

QC Batch ID: MP13188 Methods: SW846 6010B

Prep Date:

Matrix Type: AQUEOUS

riep bate.					03/11/09
Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	31		
Antimony	6.0	2.9	3		
Arsenic	10	2.7	3.2	-0.83	<10
Barium	200	.64	1.2	0.78	<200
Beryllium	4.0	.17	.3		
Boron	100	2.3	4.8		
Cadmium	4.0	.24	.3	0.13	<4.0
Calcium	5000	4.7	40		
Chromium	10	.51	1.4	-0.050	<10
Cobalt	50	.76	1		
Copper	25	1.1	1.8	0.89	<25
Iron	100	11	29		
Lead	5.0	1.3	1.8	1.1	<5.0
Magnesium	5000	8	10		
Manganese	15	.17	1.3		
Molybdenum	100	.5	1.4		
Nickel	40	.65	1	-0.40	<40
Potassium	5000	25	31		
Selenium	10	1.6	3.3	-0.29	<10
Silver	5.0	.64	.7	0.30	<5.0
Sodium	5000	99	210		
Strontium	10	.12	.3		
Thallium	10	2	4.5		
Tin	100	1.6	9.9		
Titanium	50	4.1	5.1		
Tungsten	100	5.4	7		
Vanadium	30	.65	3.5		
Zinc	20	1.1	1.3	2.5	<20

Associated samples MP13188: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M81183 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13188 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/11/09 03/11/09 Prep Date:

Prep Date:				03/11/09	709			03/11/09		
Metal	M81183-2 Original		Spikelot MPICP	% Rec	QC Limits	M81183-2 Original		RPD	QC Limits	
Aluminum										
Antimony										
Arsenic	0.0	530	500	106.0	75-125	0.0	0.0	NC	0-20	
Barium	59.9	2140	2000	104.0	75-125	59.9	60.2	0.5	0-20	
Beryllium										
Boron										
Cadmium	0.0	520	500	104.0	75-125	0.0	0.28	200.0(a)	0-20	
Calcium										
Chromium	0.0	529	500	105.8	75-125	0.0	0.0	NC	0-20	
Cobalt										
Copper	1.6	526	500	104.9	75-125	1.6	1.3	20.7 (a)	0-20	
Iron										
Lead	0.0	1060	1000	106.0	75-125	0.0	1.3	200.0(a)	0-20	
Magnesium										
Manganese										
Molybdenum										
Nickel	0.84	509	500	101.6	75-125	0.84	1.0	17.4	0-20	
Potassium										
Selenium	0.0	540	500	108.0	75-125	0.0	0.0	NC	0-20	
Silver	0.0	209	200	104.5	75-125	0.0	0.0	NC	0-20	
Sodium										
Strontium										
Thallium										
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc	25.8	546	500	104.0	75-125	25.8	25.6	0.8	0-20	

Associated samples MP13188: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) RPD acceptable due to low duplicate and sample concentrations.



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M81183
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13188 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/11/09 03/11/09 BSP Spikelot BSD Spikelot BSD QC OC MPICP Limits Limit Metal Result % Rec Result. MPICP % Rec RPD Aluminum Antimony 106.4 500 Arsenic 532 500 80-120 538 107.6 1.1 2.0 Barium 2070 2000 103.5 80-120 2100 2000 105.0 1.4 2.0 Beryllium Boron Cadmium 523 500 104.6 80-120 530 500 106.0 1.3 20 Calcium Chromium 533 500 106.6 80-120 538 500 107.6 0.9 20 Cobalt Copper 525 500 105.0 80-120 528 500 105.6 20 Iron 1060 1000 106.0 80-120 1080 1000 108.0 1.9 20 Lead Magnesium Manganese Molybdenum Nickel 509 500 101.8 80-120 513 500 102.6 0.8 20 Potassium Selenium 500 109.8 500 549 80-120 555 111.0 1.1 2.0 Silver 208 200 104.0 80-120 212 200 106.0 1.9 20 Sodium Strontium Thallium Tin Titanium Tungsten Vanadium

Associated samples MP13188: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

500

106.0

1.5 20

104.4 80-120 530

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

500

522

Zinc



SERIAL DILUTION RESULTS SUMMARY

Login Number: M81183 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13188 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/11/09 Prep Date:

Prep Date: 03/11/			, ==, ==		
Metal	M81183-2 Original	SDL 1:5	%DIF	QC Limits	
Aluminum					
Antimony					
Arsenic	0.00	0.00	NC	0-10	
Barium	59.9	66.6	11.3 (a)	0-10	
Beryllium					
Boron					
Cadmium	0.00	0.00	NC	0-10	
Calcium					
Chromium	0.00	0.00	NC	0-10	
Cobalt					
Copper	1.62	0.00	100.0(b)	0-10	
Iron					
Lead	0.00	0.00	NC	0-10	
Magnesium					
Manganese					
Molybdenum					
Nickel	0.840	0.00	100.0(b)	0-10	
Potassium					
Selenium	0.00	0.00	NC	0-10	
Silver	0.00	0.00	NC	0-10	
Sodium					
Strontium					
Thallium					
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	25.8	26.1	1.0	0-10	

Associated samples MP13188: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (anr) Analyte not requested
- (a) Serial Dilution RPD acceptable due to low duplicate and sample concentrations.
- (b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M81183

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13200 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.019	.033	-0.015	<0.20

Associated samples MP13200: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M81183 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13200 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

03/13/09 03/13/09 Prep Date:

Metal	M81183- Origina		Spikelo HGRWS1	t % Rec	QC Limits	M81183- Origina		RPD	QC Limits	
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20	

Associated samples MP13200: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M81183 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

Units: ug/l

QC Batch ID: MP13200 Methods: SW846 7470A

Prep Date: 03/13/09 03/13/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	3.0	3	100.0	3.4	20

Associated samples MP13200: M81183-2, M81183-4, M81183-6, M81183-8, M81183-10, M81183-12, M81183-14, M81183-17, M81183-19, M81183-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

Matrix Type: AQUEOUS







01/19/10

01/19/10



Technical Report for

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M81204

Sampling Date: 03/11/09

Report to:

Loureiro Eng. Associates

hmgrimm@loureiro.com

ATTN: Heather Grimm

Total number of pages in report: 93





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

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Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)

Reza Fand Lab Director

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Sample Summary

Job No:

M81204

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
M81204-1	03/11/09	10:05 LC	03/11/09	AQ	Ground Water	1117655
M81204-2	03/11/09	10:05 LC	03/11/09	AQ	Ground Water	1117655UF
M81204-3	03/11/09	12:30 LC	03/11/09	AQ	Ground Water	1117656
M81204-4	03/11/09	12:30 LC	03/11/09	AQ	Ground Water	1117656UF
M81204-5	03/11/09	14:10 LC	03/11/09	AQ	Ground Water	1117657
M81204-6	03/11/09	14:10 LC	03/11/09	AQ	Ground Water	1117657UF
M81204-7	03/11/09	10:05 LC	03/11/09	AQ	Ground Water	1117661
M81204-8	03/11/09	10:05 LC	03/11/09	AO	Ground Water	1117661UF
M81204-9		12:00 LC			Ground Water	1117660
M81204-10		10:55 LC	03/11/09		Ground Water	1117652
M81204-11	03/11/09	10:55 LC	03/11/09	AQ	Ground Water	1117652UF
M81204-12	03/11/09	13:35 LC	03/11/09	AQ	Ground Water	1117653
M81204-13	03/11/09	13:35 LC	03/11/09	AQ	Ground Water	1117653UF





Sample Summary (continued)

Loureiro Eng. Associates

Job No: M81204

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample	Collected			Matr	ix	Client	
Number	Date	Time By	Received	Code	е Туре	Sample ID	
M81204-14	03/11/09	15:20 LC	03/11/09	AQ	Ground Water	1117654	
M81204-15	03/11/09	15:20 LC	03/11/09	AQ	Ground Water	1117654UF	





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M81204

Site: UTC: 2009 Quarterly GW-Willow Pond Report Date 3/25/2009 11:13:51 AM

15 Sample(s) were collected on 03/11/2009 and were received at Accutest on 03/11/2009 properly preserved, at 1.1 Deg. C and intact. These Samples received an Accutest job number of M81204. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSG3589

- All samples were analyzed within the recommended method holding time.
- Sample(s) M81197-4MS, M81197-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- MS/MSD has compounds exceed RCP control limits (70-130%), but within in-house control limits. Refer to MS/MSD spike summary pages for detail.
- Initial calibration standard (batch MSG3531) for chloromethane, bromomethane, 1,1-dichloroethene, acetone, trans-1,2-dichloroethene, cis-1,2-dichloroethene, trans-1,4-dichloro-2-butene, naphthalene is employed quadratic regression.

Extractables by GC By Method CT-ETPH

Matrix AQ Batch ID: OP18064

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81179-16MS, M81179-16MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082

Matrix AQ Batch ID: OP18056

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) OP18056-MS/MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.



Metals By Method SW846 6010B

Matrix AQ Batch ID: MP13195

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81205-7DUP, M81205-7MS, M81205-7SDL were used as the QC samples for metals.
- RPD(s) for Duplicate for Cadmium are outside control limits for sample MP13195-D1. RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Serial Dilution for Cadmium, Copper are outside control limits for sample MP13195-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</p>
- Only selected metals requested.

Metals By Method SW846 7470A

Matrix AQ Batch ID: MP13200

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81183-4DUP, M81183-4MS were used as the QC samples for metals.

Matrix AO Batch ID: MP13208

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M81231-4DUP, M81231-4MS were used as the QC samples for metals.

Note: Compounds whose reported QC limits are outside the CT Recommended Reasonable Confidence Protocol QC criteria are designated by the lab as "Problem Compounds". QC criteria for a "Problem Compound" may meet Accutest in-house generated QC criteria but exceed the RCP criteria (compounds exceeding Accutest QC criteria are flagged on the QC summary). Refer to the QC summary pages.

Unless otherwise noted, sample dilutions are performed in order to report the result within the calibration range.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M81204).



	Sam	ple	Resu	lts
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Report of Analysis



Client Sample ID: 1117655 Lab Sample ID: M81204-1

 Lab Sample ID:
 M81204-1
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 G88864.D 1 03/18/09 EL n/a n/a MSG3589 Run #2

Purge Volume
Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	3.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	2.0	1.0	ug/l	
75-35-4	1,1-Dichloroethene	35.1	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	39.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.0	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1117655

Lab Sample ID: M81204-1 **Date Sampled:** 03/11/09 Matrix: **Date Received:** 03/11/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	33.2	1.0	ug/l
109-99-9	Tetrahydrofuran	16.5	10	ug/l
108-88-3	Toluene	2.5	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	2.4	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	305	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	14.7	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

104%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$





Client Sample ID: 1117655

 Lab Sample ID:
 M81204-1
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	110%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Page 1 of 1

Client Sample ID: 1117655

Lab Sample ID: M81204-1 **Date Sampled:** 03/11/09 Matrix: AQ - Ground Water **Date Received:** 03/11/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25805.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

Initial Volume Final Volume Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.198 0.086 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 83% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1117655

 Lab Sample ID:
 M81204-1
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15083.D 1 03/13/09 SL 03/12/09 OP18056 GBE1058

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242	ND ND ND	0.28 0.28 0.28 0.28	ug/l ug/l ug/l
12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262	ND ND ND ND	0.28 0.28 0.28 0.28	ug/l ug/l ug/l ug/l ug/l
11100-14-4 CAS No.	Aroclor 1268 Surrogate Recoveries	ND Run# 1	0.28 Run# 2	Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	86% 102% 103% 99%		32-149% 32-149% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 1 of 1

Report of Analysis

Client Sample ID: 1117655UF Lab Sample ID: M81204-2

Date Sampled: 03/11/09 Matrix: **Date Received:** 03/11/09 AQ - Ground Water

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.5	4.0	ug/l	1	03/13/09	03/17/09 PY	SW846 6010B ³	SW846 3010A ⁴
			U	1			_	
Barium	289	200	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ¹	SW846 7470A ⁵
Nickel	48.1	40	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Zinc	27.0	20	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10245 (2) Instrument QC Batch: MA10246 (3) Instrument QC Batch: MA10252 (4) Prep QC Batch: MP13195 (5) Prep QC Batch: MP13200

Client Sample ID: 1117656

 Lab Sample ID:
 M81204-3
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88858.D 1 03/18/09 EL n/a n/a MSG3589

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	24.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	4.6	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	25.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.5	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1117656

 Lab Sample ID:
 M81204-3
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	1.2	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	2.3	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	30.5	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

102%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%





Client Sample ID: 1117656

 Lab Sample ID:
 M81204-3
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	112%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Report of Analysis

Client Sample ID: 1117656

Lab Sample ID: M81204-3 **Date Sampled:** 03/11/09 Matrix: AQ - Ground Water **Date Received:** 03/11/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25806.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

Initial Volume Final Volume Run #1 920 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.0881 0.087 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 77% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



 Client Sample ID:
 1117656

 Lab Sample ID:
 M81204-3
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15084.D 1 03/13/09 SL 03/12/09 OP18056 GBE1058

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

2051-24-3

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND ND ND ND ND ND	0.28 0.28 0.28 0.28 0.28 0.28 0.28	ug/l ug/l ug/l ug/l ug/l ug/l
37324-23-5	Aroclor 1262	ND	0.28	ug/l
11100-14-4	Aroclor 1268	ND	0.28	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	101%		32-149%
877-09-8	Tetrachloro-m-xylene	111%		32-149%
2051-24-3	Decachlorobiphenyl	113%		30-150%

117%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

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Report of Analysis

Client Sample ID: 1117656UF Lab Sample ID: M81204-4

Date Sampled: 03/11/09 **Date Received:** 03/11/09 Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

AQ - Ground Water

Total Metals Analysis

Matrix:

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/13/09	03/17/09 PY	SW846 6010B ³	SW846 3010A ⁴
Barium	302	200	ug/l	1	03/13/09	03/13/09 EAL	2	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ¹	SW846 7470A ⁵
Nickel	< 40	40	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10245 (2) Instrument QC Batch: MA10246 (3) Instrument QC Batch: MA10252 (4) Prep QC Batch: MP13195 (5) Prep QC Batch: MP13200

Client Sample ID: 1117657

 Lab Sample ID:
 M81204-5
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 G88859.D 1 03/18/09 EL n/a n/a MSG3589 Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1117657

 Lab Sample ID:
 M81204-5
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 102% 79-130%

 $ND = \ Not \ detected$

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value





Client Sample ID: 1117657

 Lab Sample ID:
 M81204-5
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		80-120%
460-00-4	4-Bromofluorobenzene	111%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1117657

Lab Sample ID: M81204-5 **Date Sampled:** 03/11/09 Matrix: AQ - Ground Water **Date Received:** 03/11/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25807.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

Initial Volume Final Volume Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.131 0.086 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 79% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Report of Analysis

Keport of Analys

 Client Sample ID:
 1117657

 Lab Sample ID:
 M81204-5
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15085.D 1 03/14/09 SL 03/12/09 OP18056 GBE1058

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

2051-24-3

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262	ND	0.28 0.28 0.28 0.28 0.28 0.28 0.28 0.28	ug/l ug/l ug/l ug/l ug/l ug/l ug/l
11100-14-4	Aroclor 1268	ND	0.28	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	90% 101% 111%		32-149% 32-149% 30-150%

112%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%



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Report of Analysis

Client Sample ID: 1117657UF Lab Sample ID: M81204-6

Date Sampled: 03/11/09 Matrix: **Date Received:** 03/11/09 AQ - Ground Water

Percent Solids: n/a **Project:** UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	03/13/09	03/17/09 PY	SW846 6010B ³	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	03/13/09		2	SW846 3010A 4
Cadmium	< 4.0	4.0	ug/l	1	03/13/09	03/13/09 EAI	2	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/13/09	03/13/09 MA	SW846 7470A ¹	SW846 7470A ⁵
Nickel	< 40	40	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴
Zinc	22.1	20	ug/l	1	03/13/09	03/13/09 EAI	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10245 (2) Instrument QC Batch: MA10246 (3) Instrument QC Batch: MA10252 (4) Prep QC Batch: MP13195 (5) Prep QC Batch: MP13200

Client Sample ID: 1117661

 Lab Sample ID:
 M81204-7
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88865.D 1 03/18/09 EL n/a n/a MSG3589

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	3.7	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	36.3	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	40.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.1	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



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Client Sample ID: 1117661

 Lab Sample ID:
 M81204-7
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	32.6	1.0	ug/l	
109-99-9	Tetrahydrofuran	16.9	10	ug/l	
108-88-3	Toluene	2.4	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	2.5	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	306	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	15.3	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

105%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

B = Indicates analyte found in associated method blank



Client Sample ID: 1117661

 Lab Sample ID:
 M81204-7
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	113%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



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Report of Analysis

Client Sample ID: 1117661

Lab Sample ID: M81204-7 **Date Sampled:** 03/11/09 Matrix: AQ - Ground Water **Date Received:** 03/11/09 Method: CT-ETPH SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC25808.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

Initial Volume Final Volume Run #1 940 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.175 0.085 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 79% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Report of Analysis

Client Sample ID: 1117661 Lab Sample ID: M81204-7

Date Sampled: 03/11/09 **Matrix:** AQ - Ground Water **Date Received:** 03/11/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15087.D 1 03/14/09 SL03/12/09 OP18056 GBE1058

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
10674 11 0	A 1 1016	NID	0.20	/1
12674-11-2	Aroclor 1016	ND	0.28	ug/l
11104-28-2	Aroclor 1221	ND	0.28	ug/l
11141-16-5	Aroclor 1232	ND	0.28	ug/l
53469-21-9	Aroclor 1242	ND	0.28	ug/l
12672-29-6	Aroclor 1248	ND	0.28	ug/l
11097-69-1	Aroclor 1254	ND	0.28	ug/l
11096-82-5	Aroclor 1260	ND	0.28	ug/l
37324-23-5	Aroclor 1262	ND	0.28	ug/l
11100-14-4	Aroclor 1268	ND	0.28	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		32-149%
877-09-8	Tetrachloro-m-xylene	106%		32-149%
2051-24-3	Decachlorobiphenyl	105%		30-150%
2051-24-3	Decachlorobiphenyl	104%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1117661UF

 Lab Sample ID:
 M81204-8
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
	7.6	4.0	/1		02/12/00	00/15/00		
Arsenic	7.6	4.0	ug/l	1	03/13/09	03/17/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	291	200	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/16/09	03/17/09 CF	SW846 7470A ³	SW846 7470A ⁵
Nickel	48.5	40	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Zinc	25.0	20	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴

(1) Instrument QC Batch: MA10246
(2) Instrument QC Batch: MA10252
(3) Instrument QC Batch: MA10256
(4) Prep QC Batch: MP13195
(5) Prep QC Batch: MP13208

Client Sample ID: 1117660

 Lab Sample ID:
 M81204-9
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 G88860.D 1 03/18/09 EL n/a n/a MSG3589 Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



C

Report of Analysis

Client Sample ID: 1117660

 Lab Sample ID:
 M81204-9
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 102% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1117660

 Lab Sample ID:
 M81204-9
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		80-120%
460-00-4	4-Bromofluorobenzene	111%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



 Lab Sample ID:
 M81204-10
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88861.D 1 03/18/09 EL n/a n/a MSG3589

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 2 of 3

Client Sample ID: 1117652

 Lab Sample ID:
 M81204-10
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result RL		Units Q	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	6.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	24.7	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	S
1868 53 7	Dibromofluoromethane	101%		70 13	∩0⁄a

1868-53-7 Dibromofluoromethane 101% 79-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 3 of 3

Client Sample ID: 1117652

 Lab Sample ID:
 M81204-10
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		80-120%
460-00-4	4-Bromofluorobenzene	113%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Page 1 of 1

Client Sample ID: 1117652

 Lab Sample ID:
 M81204-10
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25809.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

Initial Volume Final Volume Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.129 0.084 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 82% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Client Sample ID: 1117652

 Lab Sample ID:
 M81204-10
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15088.D 1 03/14/09 SL03/12/09 OP18056 GBE1058 Run #2

Run #1 750 ml 5.0 ml
Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.33	ug/l
11104-28-2	Aroclor 1221	ND	0.33	ug/l
11141-16-5	Aroclor 1232	ND	0.33	ug/l
53469-21-9	Aroclor 1242	ND	0.33	ug/l
12672-29-6	Aroclor 1248	ND	0.33	ug/l
11097-69-1	Aroclor 1254	ND	0.33	ug/l
11096-82-5	Aroclor 1260	ND	0.33	ug/l
37324-23-5	Aroclor 1262	ND	0.33	ug/l
11100-14-4	Aroclor 1268	ND	0.33	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		32-149%
877-09-8	Tetrachloro-m-xylene	101%		32-149%
2051-24-3	Decachlorobiphenyl	110%		30-150%

116%

ND = Not detected

2051-24-3

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%



Page 1 of 1

Client Sample ID: 1117652UF

 Lab Sample ID:
 M81204-11
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	na/1	1	03/13/09	03/17/09 PY	SW846 6010B ²	SW846 3010A ⁴
Arsenic	< 4.0		ug/l	1	03/13/09	U3/17/U9 PY	SW 846 6010B -	
Barium	307	200	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/16/09	03/17/09 CF	SW846 7470A ³	SW846 7470A ⁵
Nickel	70.6	40	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴

(1) Instrument QC Batch: MA10246
(2) Instrument QC Batch: MA10252
(3) Instrument QC Batch: MA10256
(4) Prep QC Batch: MP13195
(5) Prep QC Batch: MP13208

Client Sample ID: 1117653

 Lab Sample ID:
 M81204-12
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88862.D 1 03/18/09 EL n/a n/a MSG3589

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 2 of 3

Client Sample ID: 1117653 Lab Sample ID: M81204-1

Lab Sample ID:M81204-12Matrix:AQ - Ground WaterMethod:SW846 8260B

Project: UTC: 2009 Quarterly GW-Willow Pond

Date Sampled: 03/11/09 **Date Received:** 03/11/09 **Percent Solids:** n/a

VOA RCP List

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	2.0	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	1.6	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

103%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%



Page 3 of 3

Client Sample ID: 1117653

 Lab Sample ID:
 M81204-12
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	96%		80-120%
460-00-4	4-Bromofluorobenzene	113%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Page 1 of 1

Client Sample ID: 1117653

 Lab Sample ID:
 M81204-12
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25811.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

n #1 940 ml Final Volume 1.0 ml

Run #1 Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.121 0.085 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 82% 50-149%

ND = Not detected RL = Reporting Limit

KL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117653

Lab Sample ID: M81204-12 **Date Sampled:** 03/11/09 Matrix: AQ - Ground Water **Date Received:** 03/11/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BE15089.D 1 03/14/09 SL03/12/09 OP18056 GBE1058

Run #2

Initial Volume Final Volume

Run #1 750 ml 5.0 ml

Run #2

2051-24-3

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND ND ND ND ND ND	0.33 0.33 0.33 0.33 0.33 0.33	ug/l ug/l ug/l ug/l ug/l ug/l ug/l
37324-23-5	Aroclor 1262	ND	0.33	ug/l ug/l Limits
11100-14-4	Aroclor 1268	ND	0.33	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	
877-09-8	Tetrachloro-m-xylene	95%		32-149%
877-09-8	Tetrachloro-m-xylene	106%		32-149%
2051-24-3	Decachlorobiphenyl	108%		30-150%

105%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117653UF

Lab Sample ID:M81204-13Date Sampled:03/11/09Matrix:AQ - Ground WaterDate Received:03/11/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.3	4.0	ug/l	1	03/13/09	03/17/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	218	200	ug/l	1	03/13/09	03/13/09 EA	1	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/16/09	03/17/09 CF	SW846 7470A ³	SW846 7470A ⁵
Nickel	< 40	40	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	03/13/09	03/13/09 EA	L SW846 6010B ¹	SW846 3010A ⁴

(1) Instrument QC Batch: MA10246
(2) Instrument QC Batch: MA10252
(3) Instrument QC Batch: MA10256
(4) Prep QC Batch: MP13195
(5) Prep QC Batch: MP13208

Client Sample ID: 1117654

 Lab Sample ID:
 M81204-14
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 G88863.D 1 03/18/09 EL n/a n/a MSG3589

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.1	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	20.6	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	14.9	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

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Page 2 of 3

Client Sample ID: 1117654

 Lab Sample ID:
 M81204-14
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	2.3	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	6.5	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	20.4	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

103%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

79-130%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1117654

 Lab Sample ID:
 M81204-14
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

VOA RCP List

CAS No. Surrogate Recoveries		Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		80-120%
460-00-4	4-Bromofluorobenzene	109%		80-120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



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Page 1 of 1

Client Sample ID: 1117654

 Lab Sample ID:
 M81204-14
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 CT-ETPH
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC25812.D 1 03/17/09 DG 03/13/09 OP18064 GBC1421

Run #2

Initial Volume Final Volume
Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 1.24 0.086 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 89% 50-149%

ND = Not detected RL = Reporting Limit

KL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117654

 Lab Sample ID:
 M81204-14
 Date Sampled:
 03/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 03/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BE15090.D 1 03/14/09 SL 03/12/09 OP18056 GBE1058

Run #2

Initial Volume Final Volume

Run #1 750 ml 5.0 ml

Run #2

CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254	ND ND ND ND ND ND	0.33 0.33 0.33 0.33 0.33	ug/l ug/l ug/l ug/l ug/l
11097-69-1 11096-82-5 37324-23-5 11100-14-4	Aroclor 1260 Aroclor 1262 Aroclor 1268	ND ND ND ND	0.33 0.33 0.33 Run# 2	ug/l ug/l ug/l ug/l Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	93% 109% 106% 102%	Kun# 2	32-149% 32-149% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1117654UF

Lab Sample ID:M81204-15Date Sampled:03/11/09Matrix:AQ - Ground WaterDate Received:03/11/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ng/1	1	03/13/09	03/17/09 PY	SW846 6010B ²	SW846 3010A ⁴
Arsenic			ug/l	1			SW 846 6010B -	
Barium	< 200	200	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Cadmium	29.3	4.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	03/16/09	03/17/09 CF	SW846 7470A ³	SW846 7470A ⁵
Nickel	1510	40	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴
Zinc	26.8	20	ug/l	1	03/13/09	03/13/09 EAL	SW846 6010B ¹	SW846 3010A ⁴

(1) Instrument QC Batch: MA10246
(2) Instrument QC Batch: MA10252
(3) Instrument QC Batch: MA10256
(4) Prep QC Batch: MP13195
(5) Prep QC Batch: MP13208



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



Parameter Certification Exceptions

Job Number: M81204

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST • BUILDING ONE

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ACCUTEST QUOTE #:	,
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M81204: Chain of Custody Page 1 of 3



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CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST • BUILDING ONE

ACCUTEST JOB #:	M81204
ACCUTEST QUOTE #:	1

	Laborato	ries	,			MARLBOR 18-481-620					753				Ľ	ACCUTES	T QUC	OTE #:	B2/	200	09-45	73	
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ACCUTEST SAMPLE #	FIELD ID / PC	DINT OF COLLECTI	ON	DATE		SAMPLED BY:	MATRIX	# OF BOTTLES		E SON		ice 3	VOCS	CT E	20.85	RCRA .						LAB USE ON	LY
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M81204: Chain of Custody Page 2 of 3



	CUTEST. Laboratories	CH		LOGY CEI MARLBOR 08-481-620	<i>ROUGH</i>	i, MA	0175	2) [] ONE	Y	7	L		TEST		TE #:	B2	120	_ව ර		181204 -453
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ACCUTEST SAMPLE #	FIELD ID / POINT OF COLLECTION	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES		SER SO	_	_)9/\	Metals	CT	PCF								SOLID LAB USE ONLY
-10	1117652	6/11/09	10:55	NE	GW	6	ລ		4	16	X		X	X								
-11	1117652 04	<u> </u>	10:55	1		1		1		1		X										
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SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESION, INCLUDING COURIER DELIVERY

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SEAL #

14 DAY TURNAROUND HARDCOPY, EMERGENCY OR RUSH IS FAX DATA UNLESS PREVIOUSLY APPROVED

3 11 09 15:40 DATE TIME:

DATE TIME:

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RECEIVED BY:

RELINQUISHED BY SAMPLER:

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RELINQUISHED BY:

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M81204: Chain of Custody Page 3 of 3

ON ICE

TEMPERATURE

2.

4.

PRESERVE WHERE APPLICABLE

RECEIVED BY:

DATE TIME:



Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

Laboratory Name: Accutest New England Client: Loureiro Eng. Associates

Project Location: Project Number: UTC: 2009 Quarterly GW-Willow Pond 88UT907

Sampling Date(s): 3/11/2009

Laboratory Sample ID(s): M81204-1, M81204-2, M81204-3, M81204-4, M81204-5, M81204-6, M81204-7, M81204-

8, M81204-9, M81204-10, M81204-11, M81204-12, M81204-13, M81204-14, M81204-15

Methods:	CT-ETPH, SW846 6010B, SW846 7470A, SW846 8082, SW846 8260B				
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes	<u> </u>	No	
1A	Where all the method specified preservation and holding time requirements met?	Yes	<u> </u>	No	
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes	_	No	
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes	<u> </u>	No	
3	Were samples received at an appropriate temperature (<6° C)?	Yes	~	No	
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes	<u>~</u>	No	
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes	7	No	
	b) Were these reporting limits met?	Yes	V	No	
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes		No	<u>~</u>
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes	<u> </u>	No	

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

l, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belie
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

Signature: Position: Lab Director Printed Name: Reza Tand Date: 3/25/2009

Accutest New England



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M81204 Job No:

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M81204-1 1117655	Collected: 11-MAR-09	10:05 By: LC	Receiv	ed: 11-MAF	R-09 By	v: JB
	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 23:00 17-MAR-09 11:35 18-MAR-09 19:39	DG	12-MAR-09 13-MAR-09		P8082RCP BCTTPH V8260RCP
M81204-2 1117655UF		10:05 By: LC	Receiv	ved: 11-MAF	R-09 By	7: JB
M81204-2	SW846 6010B SW846 7470A SW846 6010B	13-MAR-09 14:35 13-MAR-09 17:28 17-MAR-09 10:14	MA	13-MAR-09 13-MAR-09 13-MAR-09) MA	AG,BA,CD,CR,CU,NI,PB,SE,Z HG AS
M81204-3 1117656	Collected: 11-MAR-09	12:30 By: LC	Receiv	ved: 11-MAF	R-09 By	7: JB
M81204-3	SW846 8082 CT-ETPH SW846 8260B	13-MAR-09 23:37 17-MAR-09 12:14 18-MAR-09 16:57	DG	12-MAR-09 13-MAR-09		P8082RCP BCTTPH V8260RCP
M81204-4 1117656UF	Collected: 11-MAR-09	12:30 By: LC	Receiv	ved: 11-MAF	R-09 By	7: JB
M81204-4	SW846 6010B SW846 7470A SW846 6010B	13-MAR-09 14:41 13-MAR-09 17:30 17-MAR-09 10:18	MA	13-MAR-09 13-MAR-09 13-MAR-09	9 MA	AG,BA,CD,CR,CU,NI,PB,SE,Z HG AS
M81204-5 1117657	Collected: 11-MAR-09	14:10 By: LC	Receiv	ved: 11-MAF	R-09 By	v: JB
M81204-5	SW846 8082 CT-ETPH SW846 8260B	14-MAR-09 00:14 17-MAR-09 12:53 18-MAR-09 17:24	DG	12-MAR-09 13-MAR-09		P8082RCP BCTTPH V8260RCP
M81204-6 1117657UF		14:10 By: LC	Receiv	ed: 11-MAR	R-09 By	v: JB
M81204-6 M81204-6		13-MAR-09 14:47 13-MAR-09 17:32		13-MAR-09		AG,BA,CD,CR,CU,NI,PB,SE,Z HG



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M81204 Job No:

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M81204-6	SW846 6010B	17-MAR-09 10:23	PY	13-MAR-09	EAL	AS
M81204-7 1117661	Collected: 11-MAR-09	10:05 By: LC	Receiv	ed: 11-MAR	1-09 By	7: JB
M81204-7	SW846 8082 CT-ETPH SW846 8260B	14-MAR-09 01:28 17-MAR-09 13:33 18-MAR-09 20:06	DG	12-MAR-09 13-MAR-09		P8082RCP BCTTPH V8260RCP
M81204-8 1117661UF	Collected: 11-MAR-09	10:05 By: LC	Receiv	ed: 11-MAR	2-09 By	v: JB
M81204-8	SW846 6010B SW846 6010B SW846 7470A	13-MAR-09 14:52 17-MAR-09 10:27 17-MAR-09 13:30	PY	13-MAR-09 13-MAR-09 16-MAR-09	EAL	AG,BA,CD,CR,CU,NI,PB,SE,Z AS HG
M81204-9 1117660	Collected: 11-MAR-09	12:00 By: LC	Receiv	red: 11-MAR	k-09 By	7: JB
M81204-9	SW846 8260B	18-MAR-09 17:51	EL			V8260RCP
M81204-10 1117652	Collected: 11-MAR-09	10:55 By: LC	Receiv	ed: 11-MAR	1-09 By	7: JB
M81204-10	SW846 8082 CT-ETPH SW846 8260B	14-MAR-09 02:05 17-MAR-09 14:12 18-MAR-09 18:18	DG	12-MAR-09 13-MAR-09		P8082RCP BCTTPH V8260RCP
M81204-11 1117652UF	Collected: 11-MAR-09	10:55 By: LC	Receiv	ed: 11-MAR	k-09 By	v: JB
M81204-11	SW846 6010B SW846 6010B SW846 7470A	13-MAR-09 14:58 17-MAR-09 10:32 17-MAR-09 13:32	PY	13-MAR-09 13-MAR-09 16-MAR-09	EAL	AG,BA,CD,CR,CU,NI,PB,SE,Z AS HG
M81204-12 1117653	Collected: 11-MAR-09	13:35 By: LC	Receiv	ed: 11-MAR	t-09 By	7: JB
M81204-12 M81204-12	SW846 8082 CT-ETPH	14-MAR-09 02:42 17-MAR-09 15:31		12-MAR-09 13-MAR-09		P8082RCP BCTTPH



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M81204 Job No:

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M81204-12	SW846 8260B	18-MAR-09 18:45	EL			V8260RCP
M81204-13 1117653UF	Collected: 11-MAR-09	13:35 By: LC	Receiv	ed: 11-MAF	R-09 B <u>y</u>	y: JB
M81204-13	SW846 6010B SW846 6010B SW846 7470A	13-MAR-09 15:04 17-MAR-09 10:36 17-MAR-09 13:34	PY	13-MAR-09 13-MAR-09 16-MAR-09	9 EAL	AG,BA,CD,CR,CU,NI,PB,SE,Z AS HG
M81204-14 1117654	Collected: 11-MAR-09	15:20 By: LC	Receiv	ed: 11-MAF	R-09 By	y: JB
M81204-14	SW846 8082 CT-ETPH SW846 8260B	14-MAR-09 03:20 17-MAR-09 16:10 18-MAR-09 19:12	DG	12-MAR-09 13-MAR-09		P8082RCP BCTTPH V8260RCP
M81204-15 1117654UF	Collected: 11-MAR-09	15:20 By: LC	Receiv	ed: 11-MAF	R-09 By	y: JB
M81204-15	SW846 6010B SW846 6010B SW846 7470A	13-MAR-09 15:09 17-MAR-09 10:41 17-MAR-09 13:36	PY	13-MAR-09 13-MAR-09 16-MAR-09	9 EAL	AG,BA,CD,CR,CU,NI,PB,SE,Z AS HG





GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



Method: SW846 8260B

Method Blank Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3589-MB	G88846.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method: SW846 8260B

Method Blank Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3589-MB	G88846.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



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Method: SW846 8260B

.

Method Blank Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample MSG3589-MB	File ID G88846.D	DF 1	Analyzed 03/18/09	By EL	Prep Date n/a	Prep Batch n/a	Analytical Batch MSG3589

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
	Dibromofluoromethane	99%	79-130%
2037-26-5	Toluene-D8	100%	80-120%
460-00-4	4-Bromofluorobenzene	111%	80-120%



Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3589-BS	G88843A.D	1	03/18/09	EL	n/a	n/a	MSG3589
MSG3589-BSD	G88844.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	62.5	125	51.5	103	19	30-150/25
107-13-1	Acrylonitrile	250	253	101	249	100	2	60-145/25
71-43-2	Benzene	50	47.0	94	46.5	93	1	78-120/25
108-86-1	Bromobenzene	50	48.0	96	48.9	98	2	76-120/25
75-27-4	Bromodichloromethane	50	52.8	106	52.1	104	1	70-137/25
75-25-2	Bromoform	50	50.7	101	50.2	100	1	66-136/25
74-83-9	Bromomethane	50	45.5	91	44.7	89	2	50-143/25
78-93-3	2-Butanone (MEK)	50	55.3	111	50.4	101	9	53-150/25
104-51-8	n-Butylbenzene	50	51.1	102	50.9	102	0	70-141/25
135-98-8	sec-Butylbenzene	50	49.4	99	49.7	99	1	74-130/25
98-06-6	tert-Butylbenzene	50	48.3	97	48.7	97	1	73-134/25
75-15-0	Carbon disulfide	50	49.9	100	49.2	98	1	56-147/25
56-23-5	Carbon tetrachloride	50	51.7	103	51.5	103	0	64-151/25
108-90-7	Chlorobenzene	50	47.8	96	47.2	94	1	75-120/25
75-00-3	Chloroethane	50	46.3	93	45.5	91	2	50-160/25
67-66-3	Chloroform	50	47.2	94	46.7	93	1	73-130/25
74-87-3	Chloromethane	50	51.9	104	50.7	101	2	40-150/25
95-49-8	o-Chlorotoluene	50	47.0	94	47.7	95	1	75-125/25
106-43-4	p-Chlorotoluene	50	47.8	96	48.3	97	1	73-127/25
96-12-8	1,2-Dibromo-3-chloropropane	50	42.9	86	41.7	83	3	53-149/25
124-48-1	Dibromochloromethane	50	52.8	106	52.0	104	2	77-130/25
106-93-4	1,2-Dibromoethane	50	49.1	98	48.7	97	1	70-134/25
95-50-1	1,2-Dichlorobenzene	50	50.1	100	49.2	98	2	76-122/25
541-73-1	1,3-Dichlorobenzene	50	49.9	100	49.2	98	1	73-124/25
106-46-7	1,4-Dichlorobenzene	50	48.6	97	47.7	95	2	73-123/25
75-71-8	Dichlorodifluoromethane	50	60.5	121	58.8	118	3	10-150/25
75-34-3	1,1-Dichloroethane	50	46.9	94	46.3	93	1	71-130/25
107-06-2	1,2-Dichloroethane	50	50.0	100	49.1	98	2	63-145/25
75-35-4	1,1-Dichloroethene	50	47.1	94	47.0	94	0	70-128/25
156-59-2	cis-1,2-Dichloroethene	50	45.8	92	45.8	92	0	70-123/25
156-60-5	trans-1,2-Dichloroethene	50	48.4	97	47.7	95	1	70-126/25
78-87-5	1,2-Dichloropropane	50	47.8	96	47.3	95	1	76-124/25
142-28-9	1,3-Dichloropropane	50	48.5	97	47.9	96	1	79-123/25
594-20-7	2,2-Dichloropropane	50	51.8	104	50.6	101	2	30-150/25
563-58-6	1,1-Dichloropropene	50	48.7	97	49.1	98	1	76-128/25
10061-01-5	cis-1,3-Dichloropropene	50	49.1	98	48.4	97	1	70-138/25



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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3589-BS	G88843A.D	1	03/18/09	EL	n/a	n/a	MSG3589
MSG3589-BSD	G88844.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	50.1	100	49.6	99	1	61-140/25
100-41-4	Ethylbenzene	50	48.7	97	48.7	97	0	79-123/25
76-13-1	Freon 113	50	51.6	103	51.6	103	0	66-141/25
87-68-3	Hexachlorobutadiene	50	48.6	97	47.0	94	3	60-148/25
591-78-6	2-Hexanone	50	57.8	116	51.5	103	12	52-146/25
98-82-8	Isopropylbenzene	50	48.7	97	50.0	100	3	75-128/25
99-87-6	p-Isopropyltoluene	50	50.0	100	50.4	101	1	73-130/25
1634-04-4	Methyl Tert Butyl Ether	50	48.5	97	47.2	94	3	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	53.3	107	51.7	103	3	60-145/25
74-95-3	Methylene bromide	50	48.2	96	47.5	95	1	76-127/25
75-09-2	Methylene chloride	50	49.7	99	48.5	97	2	70-130/25
91-20-3	Naphthalene	50	47.1	94	42.8	86	10	62-140/25
103-65-1	n-Propylbenzene	50	49.6	99	50.7	101	2	73-130/25
100-42-5	Styrene	50	50.2	100	49.5	99	1	70-129/25
630-20-6	1,1,1,2-Tetrachloroethane	50	50.0	100	49.2	98	2	81-126/25
79-34-5	1,1,2,2-Tetrachloroethane	50	45.9	92	46.7	93	2	63-142/25
127-18-4	Tetrachloroethene	50	48.7	97	49.0	98	1	70-130/25
109-99-9	Tetrahydrofuran	50	48.1	96	47.0	94	2	50-147/25
108-88-3	Toluene	50	48.3	97	48.2	96	0	77-121/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	40.6	81	39.4	79	3	30-150/25
87-61-6	1,2,3-Trichlorobenzene	50	40.7	81	37.5	75	8	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	44.5	89	41.6	83	7	64-136/25
71-55-6	1,1,1-Trichloroethane	50	49.2	98	48.1	96	2	70-142/25
79-00-5	1,1,2-Trichloroethane	50	48.8	98	48.9	98	0	79-123/25
79-01-6	Trichloroethene	50	49.2	98	48.8	98	1	72-128/25
75-69-4	Trichlorofluoromethane	50	46.0	92	45.5	91	1	54-151/25
96-18-4	1,2,3-Trichloropropane	50	47.6	95	47.9	96	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	50.9	102	51.6	103	1	73-130/25
108-67-8	1,3,5-Trimethylbenzene	50	49.3	99	50.3	101	2	73-130/25
75-01-4	Vinyl chloride	50	58.1	116	57.3	115	1	45-150/25
	m,p-Xylene	100	98.0	98	97.4	97	1	74-127/25
95-47-6	o-Xylene	50	49.0	98	49.0	98	0	79-125/25



5.2.1

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Method: SW846 8260B

Blank Spike/Blank Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSG3589-BS	G88843A.D	1	03/18/09	EL	n/a	n/a	MSG3589
MSG3589-BSD	G88844.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	Dibromofluoromethane	101%	100%	79-130%
	Toluene-D8	100%	101%	80-120%
	4-Bromofluorobenzene	96%	97%	80-120%



Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M81197-4MS	G88866.D	5	03/18/09	EL	n/a	n/a	MSG3589
M81197-4MSD	G88867.D	5	03/18/09	EL	n/a	n/a	MSG3589
M81197-4	G88854.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Compound	M81197-4 ug/l	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	153	61	135	54	13	20-150/30
107-13-1	Acrylonitrile	ND	1250	1260	101	1180	94	7	55-150/30
71-43-2	Benzene	9.8	250	252	97	245	94	3	70-130/30
108-86-1	Bromobenzene	ND	250	246	98	244	98	1	71-121/30
75-27-4	Bromodichloromethane	ND	250	266	106	257	103	3	64-144/30
75-25-2	Bromoform	ND	250	193	77	185	74	4	57-133/30
74-83-9	Bromomethane	ND	250	235	94	228	91	3	40-146/30
78-93-3	2-Butanone (MEK)	ND	250	192	77	177	71	8	34-150/30
104-51-8	n-Butylbenzene	ND	250	238	95	241	96	1	61-142/30
135-98-8	sec-Butylbenzene	ND	250	243	97	243	97	0	70-130/30
98-06-6	tert-Butylbenzene	ND	250	242	97	241	96	0	70-137/30
75-15-0	Carbon disulfide	ND	250	223	89	222	89	0	42-151/30
56-23-5	Carbon tetrachloride	ND	250	264	106	258	103	2	56-158/30
108-90-7	Chlorobenzene	ND	250	240	96	237	95	1	72-122/30
75-00-3	Chloroethane	ND	250	246	98	238	95	3	46-169/30
67-66-3	Chloroform	ND	250	254	102	246	98	3	70-141/30
74-87-3	Chloromethane	ND	250	295	118	280	112	5	33-150/30
95-49-8	o-Chlorotoluene	ND	250	239	96	239	96	0	59-147/30
106-43-4	p-Chlorotoluene	ND	250	241	96	243	97	1	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	207	83	199	80	4	47-156/30
124-48-1	Dibromochloromethane	ND	250	229	92	226	90	1	70-130/30
106-93-4	1,2-Dibromoethane	ND	250	252	101	242	97	4	65-138/30
95-50-1	1,2-Dichlorobenzene	ND	250	244	98	240	96	2	72-123/30
541-73-1	1,3-Dichlorobenzene	ND	250	246	98	244	98	1	70-124/30
106-46-7	1,4-Dichlorobenzene	ND	250	238	95	236	94	1	70-124/30
75-71-8	Dichlorodifluoromethane	ND	250	273	109	264	106	3	10-150/30
75-34-3	1,1-Dichloroethane	ND	250	256	102	245	98	4	70-141/30
107-06-2	1,2-Dichloroethane	ND	250	274	110	261	104	5	60-153/30
75-35-4	1,1-Dichloroethene	ND	250	240	96	233	93	3	63-134/30
156-59-2	cis-1,2-Dichloroethene	ND	250	245	98	237	95	3	64-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	251	100	244	98	3	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	256	102	250	100	2	73-130/30
142-28-9	1,3-Dichloropropane	ND	250	251	100	241	96	4	75-127/30
594-20-7	2,2-Dichloropropane	ND	250	254	102	244	98	4	30-150/30
563-58-6	1,1-Dichloropropene	ND	250	252	101	245	98	3	73-134/30
10061-01-5	cis-1,3-Dichloropropene	ND	250	250	100	242	97	3	58-142/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M81197-4MS	G88866.D	5	03/18/09	EL	n/a	n/a	MSG3589
M81197-4MSD	G88867.D	5	03/18/09	EL	n/a	n/a	MSG3589
M81197-4	G88854.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Compound	M81197-4 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND	250	252	101	246	98	2	53-143/30
100-41-4	Ethylbenzene	ND	250	243	97	240	96	1	60-138/30
76-13-1	Freon 113	ND	250	265	106	257	103	3	60-149/30
87-68-3	Hexachlorobutadiene	ND	250	220	88	222	89	1	54-135/30
591-78-6	2-Hexanone	ND	250	195	78	184	74	6	32-148/30
98-82-8	Isopropylbenzene	ND	250	248	99	248	99	0	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	242	97	240	96	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	261	104	250	100	4	54-144/30
108-10-1	4-Methyl-2-pentanone (MIBK)		250	274	110	259	104	6	53-151/30
74-95-3	Methylene bromide	ND	250	258	103	246	98	5	73-136/30
75-09-2	Methylene chloride	ND	250	266	106	259	104	3	64-140/30
91-20-3	Naphthalene	ND	250	155	62	176	70	13	48-143/30
103-65-1	n-Propylbenzene	ND	250	249	100	251	100	1	65-136/30
100-42-5	Styrene	ND	250	216	86	214	86	1	61-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	253	101	249	100	2	78-128/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	239	96	231	92	3	60-150/30
127-18-4	Tetrachloroethene	ND	250	246	98	240	96	2	70-130/30
109-99-9	Tetrahydrofuran	ND	250	267	107	239	96	11	40-150/30
108-88-3	Toluene	ND	250	246	98	242	97	2	66-134/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	250	181	72	175	70	3	20-150/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	148	59	156	62	5	57-127/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	175	70	185	74	6	57-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	259	104	251	100	3	62-153/30
79-00-5	1,1,2-Trichloroethane	ND	250	256	102	247	99	4	77-127/30
79-01-6	Trichloroethene	ND	250	254	102	249	100	2	66-132/30
75-69-4	Trichlorofluoromethane	ND	250	239	96	230	92	4	48-161/30
96-18-4	1,2,3-Trichloropropane	ND	250	234	94	228	91	3	61-138/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	241	96	242	97	0	54-143/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	231	92	231	92	0	62-139/30
75-01-4	Vinyl chloride	ND	250	309	124	297	119	4	38-150/30
	m, p-Xylene	ND	500	482	96	473	95	2	55-142/30
95-47-6	o-Xylene	ND	250	243	97	237	95	3	65-136/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:**

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M81197-4MS	G88866.D	5	03/18/09	EL	n/a	n/a	MSG3589
M81197-4MSD	G88867.D	5	03/18/09	EL	n/a	n/a	MSG3589
M81197-4	G88854.D	1	03/18/09	EL	n/a	n/a	MSG3589

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	MS	MSD	M81197-4	Limits
1868-53-7	Dibromofluoromethane	105%	103%	99%	79-130%
2037-26-5	Toluene-D8	101%	100%	98%	80-120%
460-00-4	4-Bromofluorobenzene	97%	98%	110%	80-120%



Volatile Internal Standard Area Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

 Check Std:
 MSG3589-CC3531
 Injection Date:
 03/18/09

 Lab File ID:
 G88843.D
 Injection Time:
 10:06

Instrument ID: GCMSG Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	181524 363048 90762	9.05 9.55 8.55	264719 529438 132360	9.92 10.42 9.42	142121 284242 71061	13.17 13.67 12.67	118462 236924 59231	15.73 16.23 15.23		6.65 7.15 6.15
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSG3589-BS MSG3589-BSD MSG3589-MB GP10203-LB1 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ GP10203-LS1 ZZZZZZ M81197-4 ZZZZZZ ZZZZZZ M81197-4 ZZZZZZ M81204-3 M81204-5 M81204-9 M81204-10 M81204-12 M81204-14	181524 190320 181821 185366 186138 184019 179176 178843 178707 182314 183296 185589 182589 185013 182276 176650 176429 175862 172912	9.05 9.05 9.05 9.05 9.05 9.05 9.05 9.05	264719 275299 261410 267574 270192 268024 262352 262065 262381 262962 263167 272383 262096 267887 264776 256086 255954 255082 251201 258501	9.92 9.92 9.92 9.92 9.92 9.92 9.92 9.92	142121 147599 133419 135119 135956 134371 129795 130216 141235 135605 131864 135346 134833 134744 132788 129182 129375 127470 128752 130804	13.17 13.17 13.17 13.18 13.17 13.18 13.17 13.17 13.18 13.17 13.18 13.17 13.18 13.17 13.17	118462 118684 89097 89684 89049 87306 85516 85483 118227 110587 88255 93148 103874 87823 87106 84755 85985 80591 81167	15.73 15.74 15.74 15.73 15.73 15.73 15.74 15.73 15.74 15.73 15.74 15.73 15.74 15.73	62003 56281 55102 56348 52779 53862 58793 58895 64745 62468 63758 63976 59629 61252 58119 55797 55577 69011	6.65 6.65 6.67 6.67 6.67 6.67 6.65 6.66 6.67 6.66 6.67 6.67
M81204-1 M81204-7 M81197-4MS M81197-4MSD	175806 173152 179818 186407	9.05 9.05 9.05 9.05	255943 257231 265526 273714	9.92 9.92 9.92 9.92	130710 132800 145736 149116	13.17 13.17 13.17 13.17	86886 85577 118542 118788	15.74 15.73 15.73 15.73	65069	6.66 6.66 6.66

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9



⁽a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

⁽b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

Volatile Surrogate Recovery Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab			
Sample ID	File ID	S1	S2	S3
M81204-1	G88864.D	104.0	99.0	110.0
M81204-3	G88858.D	102.0	99.0	112.0
M81204-5	G88859.D	102.0	98.0	111.0
M81204-7	G88865.D	105.0	99.0	113.0
M81204-9	G88860.D	102.0	100.0	111.0
M81204-10	G88861.D	101.0	97.0	113.0
M81204-12	G88862.D	103.0	96.0	113.0
M81204-14	G88863.D	103.0	99.0	109.0
M81197-4MS	G88866.D	105.0	101.0	97.0
M81197-4MSD	G88867.D	103.0	100.0	98.0
MSG3589-BS	G88843A.D	101.0	100.0	96.0
MSG3589-BSD	G88844.D	100.0	101.0	97.0
MSG3589-MB	G88846.D	99.0	100.0	111.0

Surrogate Recovery Compounds Limits

 S1 = Dibromofluoromethane
 79-130%

 S2 = Toluene-D8
 80-120%

 S3 = 4-Bromofluorobenzene
 80-120%





GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



Method: CT-ETPH

Method Blank Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18064-MB	File ID BC25800.D	DF 1	Analyzed 03/16/09	By DG	Prep Date 03/13/09	Prep Batch OP18064	Analytical Batch GBC1421

The QC reported here applies to the following samples:

 $M81204\text{--}1,\ M81204\text{--}3,\ M81204\text{--}5,\ M81204\text{--}7,\ M81204\text{--}10,\ M81204\text{--}12,\ M81204\text{--}14$

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 69% 50-149%



Method: SW846 8082

Method Blank Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18056-MB	File ID BE15076.D	DF 1	Analyzed 03/13/09	By SL	Prep Date 03/12/09	Prep Batch OP18056	Analytical Batch GBE1058

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries		Limits
	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	99% 114% 95%	32-149% 32-149% 30-150%
2051-24-3	Decachlorobiphenyl	94%	30-150%



Method: CT-ETPH

Blank Spike Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18064-BS	File ID DI BC25801C.D1	Analyzed 03/17/09	By DG	Prep Date 03/13/09	Prep Batch OP18064	Analytical Batch GBC1421

The QC reported here applies to the following samples:

M81204-1, M81204-3, M81204-5, M81204-7, M81204-10, M81204-12, M81204-14

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.568	81	60-120

CAS No. Surrogate Recoveries BSP Limits
3386-33-2 1-Chlorooctadecane 78% 50-149%



Method: SW846 8082

Blank Spike Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP18056-BS	File ID BE15077.D	DF 1	Analyzed 03/13/09	By SL	Prep Date 03/12/09	Prep Batch OP18056	Analytical Batch GBE1058

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	1.9	95	55-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	2.1	105	61-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
	Tetrachloro-m-xylene	103%	32-149%
	Tetrachloro-m-xylene	115%	32-149%
	Decachlorobiphenyl	100%	30-150%
	Decachlorobiphenyl	96%	30-150%



Method: CT-ETPH

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18064-MS	BC25802.D	1	03/17/09	DG	03/13/09	OP18064	GBC1421
OP18064-MSD	BC25803.D	1	03/17/09	DG	03/13/09	OP18064	GBC1421
M81179-16	BC25804.D	1	03/17/09	DG	03/13/09	OP18064	GBC1421

The QC reported here applies to the following samples:

CAS No.	Compound	M81179-16 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.600	86	0.562	80	7	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8	1179-16	Limits			
3386-33-2	1-Chlorooctadecane	76%	75%	68%)	50-149%			



Page 1 of 1

Method: SW846 8082

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP18056-MS	BE15078.D	1	03/13/09	SL	03/12/09	OP18056	GBE1058
OP18056-MSD	BE15079.D	1	03/13/09	SL	03/12/09	OP18056	GBE1058
M81179-12	BE15080.D	1	03/13/09	SL	03/12/09	OP18056	GBE1058

The QC reported here applies to the following samples:

M81204-1, M81204-3, M81204-5, M81204-7, M81204-10, M81204-12, M81204-14

CAS No. Co	ompound	M81179-12 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 Ar	roclor 1016	ND	2	2.0	100	2.0	100	0	53-140/36
11104-28-2 Ar	roclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 Ar	roclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 Ar	roclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 Ar	roclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 Ar	roclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 Ar	roclor 1260	ND	2	2.2	110	2.2	110	0	54-140/27
37324-23-5 Ar	roclor 1262	ND		ND		ND		nc	40-140/20
11100-14-4 Ar	roclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	M81179-12	Limits
877-09-8	Tetrachloro-m-xylene	80%	103%	84%	32-149%
877-09-8	Tetrachloro-m-xylene	112%	113%	104%	32-149%
2051-24-3	Decachlorobiphenyl	97%	90%	87%	30-150%
2051-24-3	Decachlorobiphenyl	90%	87%	79%	30-150%



Semivolatile Surrogate Recovery Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab	
Sample ID	File ID	S1 a
M81204-1	BC25805.D	83.0
M81204-3	BC25805.D BC25806.D	77.0
M81204-5	BC25807.D	79.0
M81204-7	BC25808.D	79.0
M81204-10	BC25809.D	82.0
M81204-12	BC25811.D	82.0
M81204-14	BC25812.D	89.0
OP18064-BS	BC25801C.D	78.0
OP18064-MB	BC25800.D	69.0
OP18064-MS	BC25802.D	76.0
OP18064-MSD	BC25803.D	75.0

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



Semivolatile Surrogate Recovery Summary

Job Number: M81204

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8082 Matrix: AQ

Samples and QC shown here apply to the above method

Lab				
File ID	S1 a	S1 b	S2 a	S2 b
BE15083.D	86.0	102.0	103.0	99.0
BE15084.D	101.0	111.0	113.0	117.0
BE15085.D	90.0	101.0	111.0	112.0
BE15087.D	92.0	106.0	105.0	104.0
BE15088.D	92.0	101.0	110.0	116.0
BE15089.D	95.0	106.0	108.0	105.0
BE15090.D	93.0	109.0	106.0	102.0
BE15077.D	103.0	115.0	100.0	96.0
BE15076.D	99.0	114.0	95.0	94.0
BE15078.D	80.0	112.0	97.0	90.0
BE15079.D	103.0	113.0	90.0	87.0
	BE15083.D BE15084.D BE15085.D BE15087.D BE15088.D BE15089.D BE15090.D BE15077.D BE15076.D BE15078.D	File ID S1 a BE15083.D 86.0 BE15084.D 101.0 BE15085.D 90.0 BE15087.D 92.0 BE15088.D 92.0 BE15089.D 95.0 BE15090.D 93.0 BE15077.D 103.0 BE15076.D 99.0 BE15078.D 80.0	File ID S1 a S1 b BE15083.D 86.0 102.0 BE15084.D 101.0 111.0 BE15085.D 90.0 101.0 BE15087.D 92.0 106.0 BE15088.D 92.0 101.0 BE15089.D 95.0 106.0 BE15090.D 93.0 109.0 BE15077.D 103.0 115.0 BE15076.D 99.0 114.0 BE15078.D 80.0 112.0	File ID S1 a S1 b S2 a BE15083.D 86.0 102.0 103.0 BE15084.D 101.0 111.0 113.0 BE15085.D 90.0 101.0 111.0 BE15087.D 92.0 106.0 105.0 BE15088.D 92.0 101.0 110.0 BE15089.D 95.0 106.0 108.0 BE15090.D 93.0 109.0 106.0 BE15077.D 103.0 115.0 100.0 BE15076.D 99.0 114.0 95.0 BE15078.D 80.0 112.0 97.0

Surrogate Recovery Compounds Limits

S1 = Tetrachloro-m-xylene 32-149% S2 = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1(b) Recovery from GC signal #2





Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M81204 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13195 Methods: SW846 6010B Matrix Type: AQUEOUS Units: $\mbox{ug/l}$

Prep Date: 03/13/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	31		
Antimony	6.0	2.9	3		
Arsenic	10	2.7	3.2	-0.76	<10
Barium	200	.64	1.2	1.8	<200
Beryllium	4.0	.17	.3		
Boron	100	2.3	4.8		
Cadmium	4.0	. 24	.3	0.0	<4.0
Calcium	5000	4.7	40		
Chromium	10	.51	1.4	0.19	<10
Cobalt	50	.76	1		
Copper	25	1.1	1.8	0.31	<25
Iron	100	11	29		
Lead	5.0	1.3	1.8	-0.46	<5.0
Magnesium	5000	8	10		
Manganese	15	.17	1.3		
Molybdenum	100	.5	1.4		
Nickel	40	.65	1	1.9	<40
Potassium	5000	25	31		
Selenium	10	1.6	3.3	-1.5	<10
Silver	5.0	.64	.7	-0.44	<5.0
Sodium	5000	99	210		
Strontium	10	.12	.3		
Thallium	10	2	4.5		
Tin	100	1.6	9.9		
Titanium	50	4.1	5.1		
Tungsten	100	5.4	7		
Vanadium	30	.65	3.5		
Zinc	20	1.1	1.3	1.4	<20

Associated samples MP13195: M81204-2, M81204-4, M81204-6, M81204-8, M81204-11, M81204-13, M81204-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{}$

(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M81204 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13195 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Matrix Type:	AQUEOUS		Unit	s: ug/l					
Prep Date:				03/13/09				03/13/09	
Metal	M81205-7 Original		Spikelot MPICP	% Rec	QC Limits	M81205-7 Original		RPD	QC Limits
Aluminum									
Antimony									
Arsenic	0.0	523	500	104.6	75-125	0.0	0.0	NC	0-20
Barium	82.7	2120	2000	101.9	75-125	82.7	81.8	1.1	0-20
Beryllium									
Boron									
Cadmium	0.26	504	500	100.7	75-125	0.26	0.0	200.0(a)	0-20
Calcium									
Chromium	0.0	522	500	104.4	75-125	0.0	0.0	NC	0-20
Cobalt									
Copper	5.3	496	500	98.1	75-125	5.3	5.1	3.8	0-20
Iron									
Lead	0.0	1040	1000	104.0	75-125	0.0	0.0	NC	0-20
Magnesium									
Manganese									
Molybdenum									
Nickel	4.5	492	500	97.5	75-125	4.5	3.7	19.5	0-20
Potassium									
Selenium	0.0	533	500	106.6	75-125	0.0	0.0	NC	0-20
Silver	0.0	201	200	100.5	75-125	0.0	0.0	NC	0-20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									

Associated samples MP13195: M81204-2, M81204-4, M81204-6, M81204-8, M81204-11, M81204-13, M81204-15

101.0 75-125 28.9

28.8

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

534

Zinc

28.9

500



⁽N) Matrix Spike Rec. outside of QC limits

⁽anr) Analyte not requested

⁽a) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M81204 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13195 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/13/09 03/13/09 Prep Date:

11, 11, 11							33, 23, 31		
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	522	500	104.4	80-120	515	500	103.0	1.4	20
Barium	2020	2000	101.0	80-120	2000	2000	100.0	1.0	20
Beryllium									
Boron									
Cadmium	503	500	100.6	80-120	500	500	100.0	0.6	20
Calcium									
Chromium	519	500	103.8	80-120	517	500	103.4	0.4	20
Cobalt									
Copper	489	500	97.8	80-120	477	500	95.4	2.5	20
Iron									
Lead	1030	1000	103.0	80-120	1030	1000	103.0	0.0	20
Magnesium									
Manganese									
Molybdenum									
Nickel	486	500	97.2	80-120	483	500	96.6	0.6	20
Potassium									
Selenium	532	500	106.4	80-120	527	500	105.4	0.9	20
Silver	199	200	99.5	80-120	197	200	98.5	1.0	20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	506	500	101.2	80-120	503	500	100.6	0.6	20

Associated samples MP13195: M81204-2, M81204-4, M81204-6, M81204-8, M81204-11, M81204-13, M81204-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{\ }$

(anr) Analyte not requested



SERIAL DILUTION RESULTS SUMMARY

Login Number: M81204 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13195 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

03/13/09 Prep Date:

		03/13/09	
M81205-7 Original		%DIF	QC Limits
0.00	0.00	NC	0-10
82.7	85.0	2.8	0-10
0.260	1.60	515.4(a)	0-10
0.00	0.00	NC	0-10
5.28	10.6	100.2(a)	0-10
0.00	0.00	NC	0-10
4.46	4.34	2.7	0-10
0.00	0.00	NC	0-10
0.00	0.00	NC	0-10
28.9	29.7	2.6	0-10
	0.00 82.7 0.260 0.00 5.28 0.00 4.46 0.00 0.00	0.00 0.00 82.7 85.0 0.260 1.60 0.00 0.00 5.28 10.6 0.00 0.00 4.46 4.34 0.00 0.00 0.00 0.00	M81205-7 Original SDL 1:5 %DIF 0.00 0.00 NC 82.7 85.0 2.8 0.260 1.60 515.4(a) 0.00 0.00 NC 5.28 10.6 100.2(a) 0.00 0.00 NC 4.46 4.34 2.7 0.00 0.00 NC 0.00 NC

Associated samples MP13195: M81204-2, M81204-4, M81204-6, M81204-8, M81204-11, M81204-13, M81204-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M81204

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13200 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/13/09

Associated samples MP13200: M81204-2, M81204-4, M81204-6

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\bar{\ }$

(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M81204 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

03/13/09

QC Batch ID: MP13200 Matrix Type: AQUEOUS

Units: ug/l

Methods: SW846 7470A

03/13/09

Prep Date:

Metal	M81183-4 Original		Spikelot HGRWS1	% Rec	QC Limits	M81183-4 Original		RPD	QC Limits
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20

Associated samples MP13200: M81204-2, M81204-4, M81204-6

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\hfill \hfill$

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M81204 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

Units: ug/l

QC Batch ID: MP13200 Methods: SW846 7470A

Prep Date: 03/13/09 03/13/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	3.0	3	100.0	3.4	20

Associated samples MP13200: M81204-2, M81204-4, M81204-6

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\bar{\ }$

(anr) Analyte not requested

Matrix Type: AQUEOUS



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M81204

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13208 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/16/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.035	.048	-0.076	<0.20

Associated samples MP13208: M81204-8, M81204-11, M81204-13, M81204-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M81204 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

Units: ug/l

QC Batch ID: MP13208 Methods: SW846 7470A

03/16/09 03/16/09 Prep Date:

Metal	M81231-4 Original		Spikelot HGRWS1	% Rec	QC Limits	M81231-4 Original		RPD	QC Limits
Mercury	0.0	3.0	3	100.0	75-125	0.0	0.0	NC	0-20

Associated samples MP13208: M81204-8, M81204-11, M81204-13, M81204-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\hfill \hfill \h$

Matrix Type: AQUEOUS

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested



SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M81204
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13208 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 03/16/09 03/16/09

Metal	BSP Result	Spikelot HGRWS1		QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.1	3	103.3	80-120	3.2	3	106.7	3.2	20

Associated samples MP13208: M81204-8, M81204-11, M81204-13, M81204-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\bar{\ }$

(anr) Analyte not requested





07/07/09

07/07/09



Technical Report for

Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring

88UT907

Accutest Job Number: M83376

Sampling Date: 06/04/09

Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: 103





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579) NY (11791) NJ (MA926) PA (68-01121) NC (653) IL (200018) NAVY USACE

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1 of 1

Lab Director

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Sample Summary

Job No:

M83376

Loureiro Eng. Associates

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample	Collected			Matri	iv	Client
Number	Date	Time By	Received			Sample ID
M83376-1	06/04/09	12:00 SK	06/04/09	AQ	Ground Water	1123432
M83376-2	06/04/09	12:00 SK	06/04/09	AQ	Ground Water	1123432UF
M83376-3	06/04/09	14:45 SK	06/04/09	AQ	Ground Water	1123433
M83376-4	06/04/09	14:45 SK	06/04/09	AQ	Ground Water	1123433UF
M83376-5	06/04/09	09:00 SK	06/04/09	AQ	Ground Water	1123446
M83376-6	06/04/09	10:35 SK	06/04/09	AQ	Ground Water	1123429
M83376-7	06/04/09	10:35 SK	06/04/09	AQ	Ground Water	1123429UF
M83376-8	06/04/09	12:30 SK	06/04/09	AQ	Ground Water	1123430
M83376-9	06/04/09	12:30 SK	06/04/09	AQ	Ground Water	1123430UF
M83376-10	06/04/09	14:35 SK	06/04/09	AQ	Ground Water	1123431
M83376-11	06/04/09	14:35 SK	06/04/09	AQ	Ground Water	1123431UF
M83376-12	06/04/09	12:50 SK	06/04/09	AQ	Ground Water	1123426
M83376-13	06/04/09	12:50 SK	06/04/09	AQ	Ground Water	1123426UF





Sample Summary (continued)

Loureiro Eng. Associates

Job No: M83376

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample	ample Collected		Matrix		ix	Client
Number	Date	Time By	Received	Code	Туре	Sample ID
M83376-14	06/04/09	15:20 SK	06/04/09	AQ	Ground Water	1123428
M83376-15	06/04/09	15:20 SK	06/04/09	AQ	Ground Water	1123428UF





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M83376

Site: UTC:Willow Brook & Pond 2008 Monitoring Report Date 6/18/2009 4:33:14 PM

15 Sample(s) were collected on 06/04/2009 and were received at Accutest on 06/04/2009 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of M83376. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSN1279

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- MS for Carbon tetrachloride is outside control limits. Associated samples are non-detect for this compound.
- MSN1279-BS for Carbon tetrachloride: Outside control limits. Associated samples are non-detect for this compound.
- Initial calibration verification standard MSN1271-ICV1271 for acetone exceed 35% Difference.
- Continuing calibration check standard for chloromethane, carbon tetrachloride exceed 30% Difference. This check standard met RCP criteria.

Matrix AQ Batch ID: MSP1243

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83210-3MS, M83210-3MSD were used as the QC samples indicated.
- MS/MSD Recovery(s) for Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration standard in batch MSP1243 for acetone is employed quadratic regression
- Continuing calibration check standard for acetone exceed 30% Difference. This check standard met RCP criteria.

Extractables by GC By Method CT-ETPH 7/06

Matrix AQ Batch ID: OP18693

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83410-5MS, M83410-5MSD were used as the QC samples indicated.

Extractables by GC By Method SW846 8082

Matrix AQ Batch ID: OP18709

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83410-9MS, M83410-9MSD were used as the QC samples indicated.



Metals By Method SW846 6010B

Matrix AQ Batch ID: MP13622

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83376-4DUP, M83376-4MS, M83376-4DUP, M83376-4DUP were used as the QC samples for metals.
- RPD(s) for Duplicate for Cadmium, Lead, Selenium are outside control limits for sample MP13622-D1. RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Serial Dilution for Cadmium, Chromium, Copper, Selenium, Zinc are outside control limits for sample MP13622-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</p>
- Only selected metals requested.

Metals By Method SW846 7470A

Matrix AQ Batch ID: MP13617

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83316-6DUP, M83316-6MS were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M83376).



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Report of Analysis



Report of Analysis

Client Sample ID: 1123432

 Lab Sample ID:
 M83376-1
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37571.D 1 06/09/09 AMY n/a n/a MSP1243

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

C

Report of Analysis

Client Sample ID: 1123432

 Lab Sample ID:
 M83376-1
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	1.5	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

96%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Report of Analysis

Client Sample ID: 1123432 Lab Sample ID: M83376-1

 Lab Sample ID:
 M83376-1
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Report of Analysis

Page 1 of 1

Client Sample ID: 1123432

Lab Sample ID: M83376-1 Date Sampled: 06/04/09 Matrix: AQ - Ground Water Date Received: 06/04/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 Run #1 BC27952.D 1 06/17/09 DG OP18693 GBC1514

Run #2

Initial Volume Final Volume Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.132 0.084 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 67% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Report of Analysis

Client Sample ID: 1123432 Lab Sample ID: M83376-1

Date Sampled: 06/04/09 Matrix: AQ - Ground Water **Date Received:** 06/04/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF68557.D 1 06/16/09 SL06/10/09 OP18709 GEF3164

Run #2

Initial Volume Final Volume

Run #1 950 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l
11104-28-2	Aroclor 1221	ND	0.26	ug/l
11141-16-5	Aroclor 1232	ND	0.26	ug/l
53469-21-9	Aroclor 1242	ND	0.26	ug/l
12672-29-6	Aroclor 1248	ND	0.26	ug/l
11097-69-1	Aroclor 1254	ND	0.26	ug/l
11096-82-5	Aroclor 1260	ND	0.26	ug/l
37324-23-5	Aroclor 1262	ND	0.26	ug/l
11100-14-4	Aroclor 1268	ND	0.26	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	93%		30-150%
877-09-8	Tetrachloro-m-xylene	91%		30-150%
2051-24-3	Decachlorobiphenyl	60%		30-150%
2051-24-3	Decachlorobiphenyl	60%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Report of Analysis

Client Sample ID: 1123432UF Lab Sample ID: M83376-2

Date Sampled: 06/04/09 Matrix: **Date Received:** 06/04/09 AQ - Ground Water

Percent Solids: n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
	10.0	4.0			0.5/4.0/00	0.5/4.4/00	2	4
Arsenic	10.8	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560 (2) Instrument QC Batch: MA10567 (3) Prep QC Batch: MP13617 (4) Prep QC Batch: MP13622

Report of Analysis

Client Sample ID: 1123433

 Lab Sample ID:
 M83376-3
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37572.D 1 06/09/09 AMY n/a n/a MSP1243

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: 1123433

 Lab Sample ID:
 M83376-3
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	4.1	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	8.3	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	S

99%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Client Sample ID: 1123433

 Lab Sample ID:
 M83376-3
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Report of Analysis

Client Sample ID: 1123433 Lab Sample ID: M83376-3 Date Sampled: 06/04/09 Matrix: AQ - Ground Water Date Received: 06/04/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 Run #1 BC27953.D 1 06/17/09 DG OP18693 GBC1514

Run #2

Initial Volume Final Volume Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.084 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 80% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Page 1 of 1

Client Sample ID: 1123433

Lab Sample ID: M83376-3 **Date Sampled:** 06/04/09 Matrix: AQ - Ground Water **Date Received:** 06/04/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF68558.D 1 06/16/09 SL06/10/09 OP18709 GEF3164

Report of Analysis

Run #2

Initial Volume Final Volume

Run #1 940 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l
11104-28-2	Aroclor 1221	ND	0.27	ug/l
11141-16-5	Aroclor 1232	ND	0.27	ug/l
53469-21-9	Aroclor 1242	ND	0.27	ug/l
12672-29-6	Aroclor 1248	ND	0.27	ug/l
11097-69-1	Aroclor 1254	ND	0.27	ug/l
11096-82-5	Aroclor 1260	ND	0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	92%		30-150%
877-09-8	Tetrachloro-m-xylene	89%		30-150%
2051-24-3	Decachlorobiphenyl	73%		30-150%
2051-24-3	Decachlorobiphenyl	72%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Report of Analysis

Client Sample ID: 1123433UF Lab Sample ID: **Date Sampled:** 06/04/09 M83376-4 Matrix: **Date Received:** 06/04/09 AQ - Ground Water

Percent Solids: n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
							2	4
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	266	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	89.0	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560 (2) Instrument QC Batch: MA10567 (3) Prep QC Batch: MP13617 (4) Prep QC Batch: MP13622



Report of Analysis

Client Sample ID: 1123446

 Lab Sample ID:
 M83376-5
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N34527.D 1 06/18/09 WC n/a n/a MSN1279

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 2 of 3

Report of Analysis

Client Sample ID: 1123446 Lab Sample ID: M83376-5

Date Sampled: 06/04/09 Matrix: **Date Received:** 06/04/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC:Willow Brook & Pond 2008 Monitoring **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
1868-53-7	Dibromofluoromethane	115%		70-1	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



C

Report of Analysis

Client Sample ID: 1123446

 Lab Sample ID:
 M83376-5
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Client Sample ID: 1123429

 Lab Sample ID:
 M83376-6
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 MSP1243 Run #1 P37573.D 1 AMY n/a n/aRun #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1123429

 Lab Sample ID:
 M83376-6
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	S

98%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1123429

 Lab Sample ID:
 M83376-6
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	101%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Client Sample ID: 1123429

 Lab Sample ID:
 M83376-6
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27954.D 1 06/17/09 DG 06/09/09 OP18693 GBC1514

Run #2

Initial Volume Final Volume
Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 80% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Report of Analysis

Client Sample ID: 1123429 Lab Sample ID: M83376-6

 Lab Sample ID:
 M83376-6
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF68559.D 1 06/16/09 SL 06/10/09 OP18709 GEF3164

Run #2

Initial Volume Final Volume

Run #1 950 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l
11104-28-2	Aroclor 1221	ND	0.26	ug/l
11141-16-5	Aroclor 1232	ND	0.26	ug/l
53469-21-9	Aroclor 1242	ND	0.26	ug/l
12672-29-6	Aroclor 1248	ND	0.26	ug/l
11097-69-1	Aroclor 1254	ND	0.26	ug/l
11096-82-5	Aroclor 1260	ND	0.26	ug/l
37324-23-5	Aroclor 1262	ND	0.26	ug/l
11100-14-4	Aroclor 1268	ND	0.26	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		30-150%
877-09-8	Tetrachloro-m-xylene	103%		30-150%
2051-24-3	Decachlorobiphenyl	88%		30-150%
2051-24-3	Decachlorobiphenyl	84%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1123429UF

 Lab Sample ID:
 M83376-7
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

Percent Solids: n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	51.5	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Client Sample ID: 1123430

 Lab Sample ID:
 M83376-8
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37574.D 1 06/09/09 AMY n/a n/a MSP1243

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	5.7	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1123430 Lab Sample ID: M83376-8

 Lab Sample ID:
 M83376-8
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1, 1, 2, 2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	;

103%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank

 $N = \ Indicates \ presumptive \ evidence \ of \ a \ compound$



Client Sample ID: 1123430

 Lab Sample ID:
 M83376-8
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Report of Analysis

Client Sample ID: 1123430

 Lab Sample ID:
 M83376-8
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27955.D 1 06/17/09 DG 06/09/09 OP18693 GBC1514

Run #2

Initial Volume Final Volume
Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 87% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Report of Analysis

Client Sample ID: 1123430 Lab Sample ID: M83376-8

 Lab Sample ID:
 M83376-8
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

Run #1 EF68560.D DF Analyzed By Prep Date Prep Batch Analytical Batch O6/10/09 SL 06/10/09 OP18709 GEF3164

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l
11104-28-2	Aroclor 1221	ND	0.28	ug/l
11141-16-5	Aroclor 1232	ND	0.28	ug/l
53469-21-9	Aroclor 1242	ND	0.28	ug/l
12672-29-6	Aroclor 1248	ND	0.28	ug/l
11097-69-1	Aroclor 1254	ND	0.28	ug/l
11096-82-5	Aroclor 1260	ND	0.28	ug/l
37324-23-5	Aroclor 1262	ND	0.28	ug/l
11100-14-4	Aroclor 1268	ND	0.28	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	104%		30-150%
877-09-8	Tetrachloro-m-xylene	105%		30-150%
2051-24-3	Decachlorobiphenyl	87%		30-150%
2051-24-3	Decachlorobiphenyl	86%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: 1123430UF

 Lab Sample ID:
 M83376-9
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

Percent Solids: n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
					0.440.00	0.1/1.1/0.0	2	4
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Page 1 of 3

Client Sample ID: 1123431

 Lab Sample ID:
 M83376-10
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File IDDFAnalyzedByPrep DatePrep BatchAnalytical BatchRun #1P37575.D106/09/09AMYn/an/aMSP1243

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 2 of 3

Client Sample ID: 1123431

 Lab Sample ID:
 M83376-10
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC:Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	5
1868-53-7	Dibromofluoromethane	102%		70-130)%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1123431

 Lab Sample ID:
 M83376-10
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	104%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$



Page 1 of 1

Client Sample ID: 1123431

 Lab Sample ID:
 M83376-10
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27956.D 1 06/17/09 DG 06/09/09 OP18693 GBC1514

Run #2

Initial Volume Final Volume

Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 80% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Client Sample ID: 1123431

Lab Sample ID: M83376-10 **Date Sampled:** 06/04/09 Matrix: AQ - Ground Water **Date Received:** 06/04/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF68561.D 1 06/16/09 SL06/10/09 OP18709 GEF3164

Run #2

Initial Volume Final Volume

Run #1 880 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	ug/l	
				•	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
877-09-8	Tetrachloro-m-xylene	108%		30-1	50%
877-09-8	Tetrachloro-m-xylene	105%		30-1	50%
2051-24-3	Decachlorobiphenyl	76%		30-1	50%
2051-24-3	Decachlorobiphenyl	74%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123431UF

 Lab Sample ID:
 M83376-11
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Page 1 of 3

Client Sample ID: 1123426

 Lab Sample ID:
 M83376-12
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37576.D 1 06/10/09 AMY n/a n/a MSP1243

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 2 of 3

 Client Sample ID:
 1123426

 Lab Sample ID:
 M83376-12
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
1868-53-7	Dibromofluoromethane	101%		70-1	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1123426

 Lab Sample ID:
 M83376-12
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	100%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$

N = Indicates presumptive evidence of a compound



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Page 1 of 1

Client Sample ID: 1123426

 Lab Sample ID:
 M83376-12
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27957.D 1 06/17/09 DG 06/09/09 OP18693 GBC1514

Run #2

Initial Volume Final Volume Run #1 700 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.570 0.11 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 74% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$



Page 1 of 1

Client Sample ID: 1123426

Lab Sample ID: M83376-12 **Date Sampled:** 06/04/09 Matrix: AQ - Ground Water **Date Received:** 06/04/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF68572.D 1 06/17/09 SL06/10/09 OP18709 GEF3164

Run #2

Initial Volume Final Volume

Run #1 850 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.29	ug/l
11104-28-2	Aroclor 1221	ND	0.29	ug/l
11141-16-5	Aroclor 1232	ND	0.29	ug/l
53469-21-9	Aroclor 1242	ND	0.29	ug/l
12672-29-6	Aroclor 1248	ND	0.29	ug/l
11097-69-1	Aroclor 1254	ND	0.29	ug/l
11096-82-5	Aroclor 1260	ND	0.29	ug/l
37324-23-5	Aroclor 1262	ND	0.29	ug/l
11100-14-4	Aroclor 1268	ND	0.29	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	100%		30-150%
877-09-8	Tetrachloro-m-xylene	90%		30-150%
2051-24-3	Decachlorobiphenyl	75%		30-150%
2051-24-3	Decachlorobiphenyl	78%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1123426UF

 Lab Sample ID:
 M83376-13
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Client Sample ID: 1123428

Lab Sample ID: M83376-14 **Date Sampled:** 06/04/09 Matrix: AQ - Ground Water **Date Received:** 06/04/09 Method: SW846 8260B Percent Solids: n/a

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By MSP1243 Run #1 P37577.D 1 06/10/09 AMY n/a n/a Run #2

Purge Volume

Run #1 $5.0 \; ml$

Run #2

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 2 of 3

Client Sample ID: 1123428

Lab Sample ID: M83376-14 **Date Sampled:** 06/04/09 Matrix: AQ - Ground Water **Date Received:** 06/04/09 Method: SW846 8260B Percent Solids: n/a

UTC:Willow Brook & Pond 2008 Monitoring **Project:**

VOA RCP List

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	1.2	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	104%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1123428

 Lab Sample ID:
 M83376-14
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

VOA RCP List

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1123428

Lab Sample ID: M83376-14 Date Sampled: 06/04/09 Matrix: AQ - Ground Water Date Received: 06/04/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 Run #1 BC27958.D 1 06/17/09 DG OP18693 GBC1514

Run #2

Initial Volume Final Volume 1.0 ml

Run #1 950 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.084 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 81% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123428

 Lab Sample ID:
 M83376-14
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF68574.D 1 06/17/09 SL 06/10/09 OP18709 GEF3164

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

PCB List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l
11104-28-2	Aroclor 1221	ND	0.28	ug/l
11141-16-5	Aroclor 1232	ND	0.28	ug/l
53469-21-9	Aroclor 1242	ND	0.28	ug/l
12672-29-6	Aroclor 1248	ND	0.28	ug/l
11097-69-1	Aroclor 1254	ND	0.28	ug/l
11096-82-5	Aroclor 1260	ND	0.28	ug/l
37324-23-5	Aroclor 1262	ND	0.28	ug/l
11100-14-4	Aroclor 1268	ND	0.28	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	102%		30-150%
877-09-8	Tetrachloro-m-xylene	104%		30-150%
2051-24-3	Decachlorobiphenyl	89%		30-150%
2051-24-3	Decachlorobiphenyl	90%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1123428UF

 Lab Sample ID:
 M83376-15
 Date Sampled:
 06/04/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/04/09

Percent Solids: n/a

Project: UTC: Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	5.7	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/1 ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



Parameter Certification Exceptions

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5	SW846 8082	AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4	SW846 8082	AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



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M83376: Chain of Custody Page 1 of 6



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M83376: Chain of Custody Page 2 of 6



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Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

Laboratory Name: Accutest New England Client: Loureiro Eng. Associates

UTC:Willow Brook & Pond 2008 **Project Location: Project Number:** 88UT624 Monitoring

Sampling Date(s): 6/4/2009

Laboratory Sample ID(s): M83376-1, M83376-2, M83376-3, M83376-4, M83376-5, M83376-6, M83376-7, M83376-

8, M83376-9, M83376-10, M83376-11, M83376-12, M83376-13, M83376-14, M83376-15

Methods:	CT-ETPH 7/06, SW846 6010B, 7470A, 8082,8260B				
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes	<u> </u>	No	
1A	Where all the method specified preservation and holding time requirements met?	Yes	<u> </u>	No	
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes	□ NA	No	
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes	<u> </u>	No	
3	Were samples received at an appropriate temperature (<6° C)?	Yes	~	No	
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes		No	<u> </u>
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes	~	No	
	b) Were these reporting limits met?	Yes		No	~
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes		No	<u> </u>
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes	<u></u>	No	

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

l, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and beli
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

Signature: Position: Lab Director Printed Name: Reza Tand Date: 6/18/2009

Accutest New England



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M83376 Job No:

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M83376-1 1123432	Collected: 04-JUN-09	12:00 By: SK	Receiv	ved: 04-JUN-	09 By:	JВ
M83376-1 M83376-1 M83376-1	SW846 8260B SW846 8082 CT-ETPH 7/06	09-JUN-09 21:52 16-JUN-09 21:33 17-JUN-09 03:56	AMY SL DG	10-JUN-09 09-JUN-09		V8260RCP P8082PCB BCTTPH
M83376-2 1123432UF	Collected: 04-JUN-09	12:00 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
	SW846 7470A SW846 6010B	10-JUN-09 11:00 11-JUN-09 10:57	MA PY	09-JUN-09 10-JUN-09		HG AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M83376-3 1123433	Collected: 04-JUN-09	14:45 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
M83376-3	SW846 8260B SW846 8082 CT-ETPH 7/06	09-JUN-09 22:20 16-JUN-09 22:02 17-JUN-09 04:35	AMY SL DG	10-JUN-09 09-JUN-09		V8260RCP P8082PCB BCTTPH
M83376-4 1123433UF	Collected: 04-JUN-09	14:45 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
	SW846 7470A SW846 6010B	10-JUN-09 11:02 11-JUN-09 10:18	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83376-5 1123446	Collected: 04-JUN-09	09:00 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
M83376-5	SW846 8260B	18-JUN-09 14:09	WC			V8260RCP
M83376-6 1123429	Collected: 04-JUN-09	10:35 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
M83376-6	SW846 8260B SW846 8082 CT-ETPH 7/06	09-JUN-09 22:48 16-JUN-09 22:47 17-JUN-09 05:13	AMY SL DG	10-JUN-09 09-JUN-09		V8260RCP P8082PCB BCTTPH



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M83376 Job No:

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M83376-7 1123429UF		10:35 By: SK	Receiv	ed: 04-JUN-	09 By:	JB
	SW846 7470A SW846 6010B	10-JUN-09 11:05 11-JUN-09 11:03		09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83376-8 1123430	Collected: 04-JUN-09	12:30 By: SK	Receiv	ed: 04-JUN-	09 By:	JB
M83376-8	SW846 8260B SW846 8082 CT-ETPH 7/06	09-JUN-09 23:16 16-JUN-09 23:16 17-JUN-09 05:52	AMY SL DG	10-JUN-09 09-JUN-09		V8260RCP P8082PCB BCTTPH
M83376-9 1123430UF		12:30 By: SK	Receiv	ed: 04-JUN-	09 By:	JB
	SW846 7470A SW846 6010B	10-JUN-09 11:11 11-JUN-09 11:09	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83376-10 1123431	Collected: 04-JUN-09	14:35 By: SK	Receiv	ed: 04-JUN-	09 By:	JB
M83376-10	SW846 8260B SW846 8082 CT-ETPH 7/06	09-JUN-09 23:44 16-JUN-09 00:01 17-JUN-09 06:31	AMY SL DG	10-JUN-09 09-JUN-09		V8260RCP P8082PCB BCTTPH
M83376-11 1123431UF	Collected: 04-JUN-09	14:35 By: SK	Receiv	ed: 04-JUN-	09 By:	JB
	SW846 7470A SW846 6010B	10-JUN-09 11:13 11-JUN-09 11:14	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83376-12 1123426	Collected: 04-JUN-09	12:50 By: SK	Receiv	ed: 04-JUN-	09 By:	JB
M83376-12	SW846 8260B	10-JUN-09 00:12	AMY			V8260RCP



Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M83376 Job No:

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample						
Number	Method	Analyzed	By	Prepped	By	Test Codes
	SW846 8082	17-JUN-09 06:40	SL	10-JUN-09		P8082PCB
M83376-12	CT-ETPH 7/06	17-JUN-09 07:11	DG	09-JUN-09	FG	ВСТТРН
M83376-13 1123426UF	Collected: 04-JUN-09 1	12:50 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
M83376-13	SW846 7470A	10-JUN-09 11:16	MA	09-JUN-09	MA	HG
M83376-13	SW846 6010B	11-JUN-09 11:20	PY	10-JUN-09	PY	AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83376-14 1123428	Collected: 04-JUN-09 1	15:20 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
M83376-14	SW846 8260B	10-JUN-09 00:40	AMY			V8260RCP
M83376-14	CT-ETPH 7/06	17-JUN-09 07:50	DG	09-JUN-09	FG	BCTTPH
M83376-14	SW846 8082	17-JUN-09 07:54	SL	10-JUN-09	AJ	P8082PCB
M83376-15 1123428UF	Collected: 04-JUN-09 1	15:20 By: SK	Receiv	ved: 04-JUN-	09 By:	JB
M83376-15	SW846 7470A	10-JUN-09 11:18	MA	09-JUN-09	MA	HG
M83376-15	SW846 6010B	11-JUN-09 11:26	PY	10-JUN-09	PY	AG,AS,BA,CD,CR,CU,NI,PB,SI





GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP1243-MB	P37560.D	1	06/09/09	AMY	n/a	n/a	MSP1243

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method Blank Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP1243-MB	P37560.D	1	06/09/09	AMY	n/a	n/a	MSP1243

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch	
MSP1243-MB	-MB P37560.D 1		06/09/09 AM		n/a	n/a MSP1243		

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	Limits	
1868-53-7	Dibromofluoromethane	98%	70-130%
2037-26-5	Toluene-D8	101%	70-130%
460-00-4	4-Bromofluorobenzene	107%	70-130%



Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC:Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1279-MB	N34525.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1279-MB	N34525.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC:Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	$\mathbf{B}\mathbf{y}$	Prep Date	Prep Batch	Analytical Batch
MSN1279-MB	N34525.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	111%	70-130%
2037-26-5	Toluene-D8	99%	70-130%
460-00-4	4-Bromofluorobenzene	95%	70-130%



Blank Spike Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP1243-BS	P37557A.D	1	06/09/09	AMY	n/a	n/a	MSP1243

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	65.2	130	70-130
107-13-1	Acrylonitrile	250	243	97	70-130
71-43-2	Benzene	50	43.8	88	70-130
108-86-1	Bromobenzene	50	48.2	96	70-130
75-27-4	Bromodichloromethane	50	49.2	98	70-130
75-25-2	Bromoform	50	47.7	95	70-130
74-83-9	Bromomethane	50	47.6	95	70-130
78-93-3	2-Butanone (MEK)	50	53.5	107	70-130
104-51-8	n-Butylbenzene	50	48.6	97	70-130
135-98-8	sec-Butylbenzene	50	53.5	107	70-130
98-06-6	tert-Butylbenzene	50	52.4	105	70-130
75-15-0	Carbon disulfide	50	45.8	92	70-130
56-23-5	Carbon tetrachloride	50	44.0	88	70-130
108-90-7	Chlorobenzene	50	47.5	95	70-130
75-00-3	Chloroethane	50	43.2	86	70-130
67-66-3	Chloroform	50	44.9	90	70-130
74-87-3	Chloromethane	50	48.7	97	70-130
95-49-8	o-Chlorotoluene	50	51.4	103	70-130
106-43-4	p-Chlorotoluene	50	51.8	104	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	46.2	92	70-130
124-48-1	Dibromochloromethane	50	52.5	105	70-130
106-93-4	1,2-Dibromoethane	50	50.6	101	70-130
95-50-1	1,2-Dichlorobenzene	50	49.8	100	70-130
541-73-1	1,3-Dichlorobenzene	50	50.2	100	70-130
106-46-7	1,4-Dichlorobenzene	50	49.0	98	70-130
75-71-8	Dichlorodifluoromethane	50	40.8	82	70-130
75-34-3	1,1-Dichloroethane	50	42.6	85	70-130
107-06-2	1,2-Dichloroethane	50	43.4	87	70-130
75-35-4	1,1-Dichloroethene	50	44.8	90	70-130
156-59-2	cis-1,2-Dichloroethene	50	47.2	94	70-130
156-60-5	trans-1,2-Dichloroethene	50	46.0	92	70-130
78-87-5	1,2-Dichloropropane	50	45.2	90	70-130
142-28-9	1,3-Dichloropropane	50	48.0	96	70-130
594-20-7	2,2-Dichloropropane	50	19.4	39* a	70-130
563-58-6	1,1-Dichloropropene	50	46.0	92	70-130
10061-01-5	cis-1,3-Dichloropropene	50	39.2	78	70-130



Blank Spike Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSP1243-BS	P37557A.D	1	06/09/09	AMY	n/a	n/a	MSP1243

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	39.0	78	70-130
100-41-4	Ethylbenzene	50	48.5	97	70-130
76-13-1	Freon 113	50	44.2	88	70-130
87-68-3	Hexachlorobutadiene	50	52.6	105	70-130
591-78-6	2-Hexanone	50	50.5	101	70-130
98-82-8	Isopropylbenzene	50	54.1	108	70-130
99-87-6	p-Isopropyltoluene	50	53.6	107	70-130
1634-04-4	Methyl Tert Butyl Ether	50	39.9	80	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	46.1	92	70-130
74-95-3	Methylene bromide	50	48.0	96	70-130
75-09-2	Methylene chloride	50	43.1	86	70-130
91-20-3	Naphthalene	50	43.2	86	70-130
103-65-1	n-Propylbenzene	50	53.5	107	70-130
100-42-5	Styrene	50	46.2	92	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	49.4	99	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	50.1	100	70-130
127-18-4	Tetrachloroethene	50	48.2	96	70-130
109-99-9	Tetrahydrofuran	50	44.1	88	70-130
108-88-3	Toluene	50	47.5	95	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	48.2	96	70-130
87-61-6	1,2,3-Trichlorobenzene	50	45.8	92	70-130
120-82-1	1,2,4-Trichlorobenzene	50	47.1	94	70-130
71-55-6	1,1,1-Trichloroethane	50	40.7	81	70-130
79-00-5	1,1,2-Trichloroethane	50	48.7	97	70-130
79-01-6	Trichloroethene	50	48.6	97	70-130
75-69-4	Trichlorofluoromethane	50	39.1	78	70-130
96-18-4	1,2,3-Trichloropropane	50	48.7	97	70-130
95-63-6	1,2,4-Trimethylbenzene	50	52.0	104	70-130
108-67-8	1,3,5-Trimethylbenzene	50	51.6	103	70-130
75-01-4	Vinyl chloride	50	51.0	102	70-130
	m,p-Xylene	100	97.7	98	70-130
95-47-6	o-Xylene	50	48.9	98	70-130



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Method: SW846 8260B

Blank Spike Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample MSP1243-BS	File ID P37557A.D	DF 1	Analyzed 06/09/09	By AMY	Prep Date n/a	Prep Batch n/a	Analytical Batch MSP1243

The QC reported here applies to the following samples:

M83376-1, M83376-3, M83376-6, M83376-8, M83376-10, M83376-12, M83376-14

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	90%	70-130%
2037-26-5	Toluene-D8	100%	70-130%
460-00-4	4-Bromofluorobenzene	100%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



Blank Spike Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC:Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1279-BS	N34523A.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	40.3	81	70-130
107-13-1	Acrylonitrile	250	217	87	70-130
71-43-2	Benzene	50	45.0	90	70-130
108-86-1	Bromobenzene	50	43.6	87	70-130
75-27-4	Bromodichloromethane	50	53.4	107	70-130
75-25-2	Bromoform	50	54.4	109	70-130
74-83-9	Bromomethane	50	48.7	97	70-130
78-93-3	2-Butanone (MEK)	50	49.0	98	70-130
104-51-8	n-Butylbenzene	50	42.8	86	70-130
135-98-8	sec-Butylbenzene	50	44.1	88	70-130
98-06-6	tert-Butylbenzene	50	43.8	88	70-130
75-15-0	Carbon disulfide	50	47.9	96	70-130
56-23-5	Carbon tetrachloride	50	67.3	135* a	70-130
108-90-7	Chlorobenzene	50	47.1	94	70-130
75-00-3	Chloroethane	50	42.9	86	70-130
67-66-3	Chloroform	50	48.0	96	70-130
74-87-3	Chloromethane	50	34.8	70	70-130
95-49-8	o-Chlorotoluene	50	42.7	85	70-130
106-43-4	p-Chlorotoluene	50	43.0	86	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	47.1	94	70-130
124-48-1	Dibromochloromethane	50	58.5	117	70-130
106-93-4	1,2-Dibromoethane	50	47.8	96	70-130
95-50-1	1,2-Dichlorobenzene	50	44.0	88	70-130
541-73-1	1,3-Dichlorobenzene	50	43.9	88	70-130
106-46-7	1,4-Dichlorobenzene	50	42.7	85	70-130
75-71-8	Dichlorodifluoromethane	50	42.7	85	70-130
75-34-3	1,1-Dichloroethane	50	44.0	88	70-130
107-06-2	1,2-Dichloroethane	50	48.4	97	70-130
75-35-4	1,1-Dichloroethene	50	45.2	90	70-130
156-59-2	cis-1,2-Dichloroethene	50	48.1	96	70-130
156-60-5	trans-1,2-Dichloroethene	50	46.3	93	70-130
78-87-5	1,2-Dichloropropane	50	43.0	86	70-130
142-28-9	1,3-Dichloropropane	50	47.2	94	70-130
594-20-7	2,2-Dichloropropane	50	60.5	121	70-130
563-58-6	1,1-Dichloropropene	50	47.3	95	70-130
10061-01-5	cis-1,3-Dichloropropene	50	53.5	107	70-130



Blank Spike Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC:Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1279-BS	N34523A.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples: **Method:** SW846 8260B

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	52.9	106	70-130
100-41-4	Ethylbenzene	50	47.0	94	70-130
76-13-1	Freon 113	50	53.3	107	70-130
87-68-3	Hexachlorobutadiene	50	46.9	94	70-130
591-78-6	2-Hexanone	50	43.4	87	70-130
98-82-8	Isopropylbenzene	50	43.9	88	70-130
99-87-6	p-Isopropyltoluene	50	44.5	89	70-130
1634-04-4	Methyl Tert Butyl Ether	50	53.5	107	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	46.9	94	70-130
74-95-3	Methylene bromide	50	51.4	103	70-130
75-09-2	Methylene chloride	50	44.7	89	70-130
91-20-3	Naphthalene	50	42.4	85	70-130
103-65-1	n-Propylbenzene	50	44.4	89	70-130
100-42-5	Styrene	50	46.0	92	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	54.6	109	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	40.1	80	70-130
127-18-4	Tetrachloroethene	50	46.7	93	70-130
109-99-9	Tetrahydrofuran	50	44.9	90	70-130
108-88-3	Toluene	50	46.6	93	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	47.4	95	70-130
87-61-6	1,2,3-Trichlorobenzene	50	43.7	87	70-130
120-82-1	1,2,4-Trichlorobenzene	50	42.7	85	70-130
71-55-6	1,1,1-Trichloroethane	50	52.3	105	70-130
79-00-5	1,1,2-Trichloroethane	50	47.7	95	70-130
79-01-6	Trichloroethene	50	46.9	94	70-130
75-69-4	Trichlorofluoromethane	50	49.1	98	70-130
96-18-4	1,2,3-Trichloropropane	50	43.4	87	70-130
95-63-6	1,2,4-Trimethylbenzene	50	43.4	87	70-130
108-67-8	1,3,5-Trimethylbenzene	50	42.8	86	70-130
75-01-4	Vinyl chloride	50	52.9	106	70-130
	m,p-Xylene	100	92.8	93	70-130
95-47-6	o-Xylene	50	46.0	92	70-130



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Method: SW846 8260B

Blank Spike Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring Project:

Sample MSN1279-BS	File ID N34523A.D	DF 1	Analyzed 06/18/09	By WC	Prep Date n/a	Prep Batch n/a	Analytical Batch MSN1279

The QC reported here applies to the following samples:

M83376-5

CAS No.	Surrogate Recoveries	BSP	Limits	
	Dibromofluoromethane Toluene-D8	106% 99%	70-130% 70-130%	
460-00-4	4-Bromofluorobenzene	89%	70-130%	

(a) Outside control limits. Associated samples are non-detect for this compound.



Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83210-3MS	P37569.D	5	06/09/09	AMY	n/a	n/a	MSP1243
M83210-3MSD	P37570.D	5	06/09/09	AMY	n/a	n/a	MSP1243
M83210-3	P37564.D	1	06/09/09	AMY	n/a	n/a	MSP1243

The QC reported here applies to the following samples:

CAS No.	Compound	M83210-3 ug/l	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	166	66* a	169	68* a	2	70-130/30
107-13-1	Acrylonitrile	ND	1250	1130	90	1130	90	0	70-130/30
71-43-2	Benzene	ND	250	222	89	213	85	4	70-130/30
108-86-1	Bromobenzene	ND	250	241	96	227	91	6	70-130/30
75-27-4	Bromodichloromethane	ND	250	231	92	227	91	2	70-130/30
75-25-2	Bromoform	ND	250	219	88	221	88	1	70-130/30
74-83-9	Bromomethane	ND	250	183	73	214	86	16	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	211	84	219	88	4	70-130/30
104-51-8	n-Butylbenzene	ND	250	225	90	221	88	2	70-130/30
135-98-8	sec-Butylbenzene	ND	250	256	102	248	99	3	70-130/30
98-06-6	tert-Butylbenzene	ND	250	254	102	248	99	2	70-130/30
75-15-0	Carbon disulfide	ND	250	215	86	212	85	1	70-130/30
56-23-5	Carbon tetrachloride	ND	250	220	88	215	86	2	70-130/30
108-90-7	Chlorobenzene	ND	250	234	94	230	92	2	70-130/30
75-00-3	Chloroethane	ND	250	227	91	215	86	5	70-130/30
67-66-3	Chloroform	ND	250	223	89	219	88	2	70-130/30
74-87-3	Chloromethane	ND	250	260	104	239	96	8	70-130/30
95-49-8	o-Chlorotoluene	ND	250	259	104	246	98	5	70-130/30
106-43-4	p-Chlorotoluene	ND	250	256	102	246	98	4	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	202	81	211	84	4	70-130/30
124-48-1	Dibromochloromethane	ND	250	243	97	245	98	1	70-130/30
106-93-4	1,2-Dibromoethane	ND	250	239	96	236	94	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	238	95	233	93	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	238	95	235	94	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	234	94	227	91	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	212	85	210	84	1	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	217	87	209	84	4	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	208	83	205	82	1	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	222	89	216	86	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	234	94	231	92	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	233	93	231	92	1	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	224	90	219	88	2	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	231	92	235	94	2	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	193	77	190	76	2	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	235	94	227	91	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND	250	200	80	199	80	1	70-130/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M83210-3MS	P37569.D	5	06/09/09	AMY	n/a	n/a	MSP1243
M83210-3MSD	P37570.D	5	06/09/09	AMY	n/a	n/a	MSP1243
M83210-3	P37564.D	1	06/09/09	AMY	n/a	n/a	MSP1243
	12,30112	•	00,00,00			22, 50	1.151 12 15

The QC reported here applies to the following samples:

CAS No.	Compound	M83210- ug/l	-3 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	187	75	188	75	1	70-130/30
100-41-4	Ethylbenzene	ND		250	257	103	242	97	6	70-130/30
76-13-1	Freon 113	ND		250	232	93	229	92	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	220	88	219	88	0	70-130/30
591-78-6	2-Hexanone	ND		250	185	74	193	77	4	70-130/30
98-82-8	Isopropylbenzene	ND		250	278	111	266	106	4	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	254	102	249	100	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	224	90	228	91	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	197	79	207	83	5	70-130/30
74-95-3	Methylene bromide	ND		250	232	93	234	94	1	70-130/30
75-09-2	Methylene chloride	ND		250	217	87	213	85	2	70-130/30
91-20-3	Naphthalene	ND		250	190	76	192	77	1	70-130/30
103-65-1	n-Propylbenzene	ND		250	270	108	257	103	5	70-130/30
100-42-5	Styrene	ND		250	225	90	221	88	2	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	239	96	232	93	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	234	94	231	92	1	70-130/30
127-18-4	Tetrachloroethene	ND		250	244	98	238	95	2	70-130/30
109-99-9	Tetrahydrofuran	ND		250	212	85	230	92	8	70-130/30
108-88-3	Toluene	ND		250	233	93	230	92	1	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	215	86	225	90	5	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	187	75	196	78	5	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	196	78	199	80	2	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	222	89	211	84	5	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	225	90	228	91	1	70-130/30
79-01-6	Trichloroethene	ND		250	237	95	224	90	6	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	202	81	198	79	2	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	224	90	221	88	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	291	116	259	104	12	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	261	104	245	98	6	70-130/30
75-01-4	Vinyl chloride	ND		250	270	108	255	102	6	70-130/30
	m,p-Xylene	ND		500	527	105	489	98	7	70-130/30
95-47-6	o-Xylene	ND		250	243	97	236	94	3	70-130/30



5.3.1

<u>3.</u> —

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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83210-3MS	P37569.D	5	06/09/09	AMY	n/a	n/a	MSP1243
M83210-3MSD	P37570.D	5	06/09/09	AMY	n/a	n/a	MSP1243
M83210-3	P37564.D	1	06/09/09	AMY	n/a	n/a	MSP1243

The QC reported here applies to the following samples:

M83376-1, M83376-3, M83376-6, M83376-8, M83376-10, M83376-12, M83376-14

CAS No.	Surrogate Recoveries	MS	MSD	M83210-3	Limits
1868-53-7	Dibromofluoromethane	93%	94%	105%	70-130%
2037-26-5	Toluene-D8	99%	98%	100%	70-130%
460-00-4	4-Bromofluorobenzene	104%	102%	106%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.



Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83428-1MS	N34529.D	5	06/18/09	WC	n/a	n/a	MSN1279
M83428-1MSD	N34530.D	5	06/18/09	WC	n/a	n/a	MSN1279
M83428-1	N34528.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

CAS No.	Compound	M83428 ug/l	8-1 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
01101101	Compound	~g/ -	V	g/ 1	ug/1	70	ug/1	70	141 2	Tite III B
67-64-1	Acetone	ND		250	216	86	219	88	1	70-130/30
107-13-1	Acrylonitrile	ND		1250	1160	93	1190	95	3	70-130/30
71-43-2	Benzene	4.6		250	242	95	239	94	1	70-130/30
108-86-1	Bromobenzene	ND		250	222	89	228	91	3	70-130/30
75-27-4	Bromodichloromethane	ND		250	277	111	270	108	3	70-130/30
75-25-2	Bromoform	ND		250	273	109	276	110	1	70-130/30
74-83-9	Bromomethane	ND		250	217	87	240	96	10	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	258	103	274	110	6	70-130/30
104-51-8	n-Butylbenzene	ND		250	221	88	232	93	5	70-130/30
135-98-8	sec-Butylbenzene	ND		250	225	90	232	93	3	70-130/30
98-06-6	tert-Butylbenzene	ND		250	227	91	232	93	2	70-130/30
75-15-0	Carbon disulfide	1.2		250	264	105	265	106	0	70-130/30
56-23-5	Carbon tetrachloride	ND		250	331	132* a	324	130	2	70-130/30
108-90-7	Chlorobenzene	ND		250	242	97	241	96	0	70-130/30
75-00-3	Chloroethane	ND		250	236	94	238	95	1	70-130/30
67-66-3	Chloroform	ND		250	256	102	258	103	1	70-130/30
74-87-3	Chloromethane	ND		250	178	71	185	74	4	70-130/30
95-49-8	o-Chlorotoluene	0.31		250	220	88	221	88	0	70-130/30
106-43-4	p-Chlorotoluene	0.31		250	219	87	223	89	2	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	239	96	253	101	6	70-130/30
124-48-1	Dibromochloromethane	ND		250	293	117	299	120	2	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	246	98	246	98	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	229	92	231	92	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	228	91	233	93	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	219	88	224	90	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	198	79	215	86	8	70-130/30
75-34-3	1,1-Dichloroethane	ND		250	241	96	239	96	1	70-130/30
107-06-2	1,2-Dichloroethane	0.25		250	256	102	256	102	0	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	239	96	242	97	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND		250	262	105	260	104	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND		250	243	97	248	99	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	231	92	227	91	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	241	96	242	97	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	313	125	305	122	3	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	245	98	242	97	1	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	273	109	275	110	1	70-130/30



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Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83428-1MS	N34529.D	5	06/18/09	WC	n/a	n/a	MSN1279
M83428-1MSD	N34530.D	5	06/18/09	WC	n/a	n/a	MSN1279
M83428-1	N34528.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

CAS No.	Compound	M83428 ug/l	-1 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061 02 6	trans-1,3-Dichloropropene	ND		250	271	108	268	107	1	70-130/30
10001-02-0	Ethylbenzene	3.8		250	241	95	241	95	0	70-130/30
76-13-1	Freon 113	ND		250	264	106	263	105	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	239	96	252	103	5	70-130/30
591-78-6	2-Hexanone	1.8		250	226	90	243	96	7	70-130/30
98-82-8	Isopropylbenzene	1.1		250	224	89	226	90	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	230	92	237	95	3	70-130/30
1634-04-4	Methyl Tert Butyl Ether	13.8		250	295	112	300	114	2	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)			250	247	99	255	102	3	70-130/30
74-95-3	Methylene bromide	ND		250	273	109	274	110	0	70-130/30
75-09-2	Methylene chloride	ND		250	244	98	242	97	1	70-130/30
91-20-3	Naphthalene	ND		250	210	84	231	92	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	224	90	229	92	2	70-130/30
100-42-5	Styrene	ND		250	231	92	232	93	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	276	110	274	110	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	213	85	219	88	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	232	93	234	94	1	70-130/30
109-99-9	Tetrahydrofuran	ND		250	250	100	251	100	0	70-130/30
108-88-3	Toluene	0.79		250	246	98	244	97	1	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	238	95	248	99	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	227	91	243	97	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	220	88	231	92	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	274	110	271	108	1	70-130/30
79-00-5	1,1,2-Trichloroethane	0.48		250	246	98	246	98	0	70-130/30
79-01-6	Trichloroethene	ND		250	245	98	241	96	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	247	99	247	99	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	226	90	233	93	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	225	90	233	93	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	224	90	227	91	1	70-130/30
75-01-4	Vinyl chloride	ND		250	282	113	283	113	0	70-130/30
	m,p-Xylene	ND		500	477	95	476	95	0	70-130/30
95-47-6	o-Xylene	ND		250	239	96	239	96	0	70-130/30



5.3.2

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Method: SW846 8260B

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Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83428-1MS	N34529.D	5	06/18/09	WC	n/a	n/a	MSN1279
M83428-1MSD	N34530.D	5	06/18/09	WC	n/a	n/a	MSN1279
M83428-1	N34528.D	1	06/18/09	WC	n/a	n/a	MSN1279

The QC reported here applies to the following samples:

M83376-5

CAS No.	Surrogate Recoveries	MS	MSD	M83428-1	Limits
1868-53-7	Dibromofluoromethane	108%	109%	114%	70-130%
2037-26-5	Toluene-D8	101%	99%	101%	70-130%
460-00-4	4-Bromofluorobenzene	91%	91%	95%	70-130%

(a) Outside control limits. Associated samples are non-detect for this compound.



Volatile Internal Standard Area Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

 Check Std:
 MSN1279-CC1271
 Injection Date:
 06/18/09

 Lab File ID:
 N34523.D
 Injection Time:
 12:02

Instrument ID: GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	148419	8.64	269779	9.50	159045	12.75	143412	15.31	104399	6.22
Upper Limit ^a	296838	9.14	539558	10.00	318090	13.25	286824	15.81	208798	6.72
Lower Limit b	74210	8.14	134890	9.00	79523	12.25	71706	14.81	52200	5.72
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSN1279-BS	148419	8.64	269779	9.50	159045	12.75	143412	15.31	104399	6.22
MSN1279-MB	136135	8.64	255482	9.50	144742		120027	15.31	99186	6.22
ZZZZZZ	132382	8.64	252041	9.51	141281	12.76	118668	15.31	151626	6.22
M83376-5	127467	8.64	242689	9.51	137331	12.76	114284	15.31	100423	6.22
M83428-1	129995	8.64	247393	9.51	140413	12.75	117942	15.31	89228	6.22
M83428-1MS	141489	8.64	261707	9.50	158160	12.76	143162	15.31	90513	6.22
M83428-1MSD	146917	8.64	273800	9.51	165336	12.75	146547	15.31	101560	6.22
ZZZZZZ	170590	8.64	313776	9.50	175547	12.76	149921	15.31	111955	6.22
ZZZZZZ	166418	8.64	306642	9.50	176828	12.75	160470	15.31	98718	6.22
ZZZZZZ	185754	8.64	335570	9.50	205866	12.75	217672	15.32	117364	6.22
ZZZZZZ	224616	8.64	387790	9.51	225033	12.76	216095	15.31	144732	6.22
ZZZZZZ	222919	8.64	386206	9.50	220590	12.75	191468	15.31	145103	6.22
ZZZZZZ	213552	8.64	372101	9.50	207980	12.76	184690	15.31	145607	6.22

IS 1 = Pentafluorobenzene IS 2 = 1,4-Difluorobenzene IS 3 = Chlorobenzene-D5 IS 4 = 1,4-Dichlorobenzene-d4 IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Internal Standard Area Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

 Check Std:
 MSP1243-CC1243
 Injection Date:
 06/09/09

 Lab File ID:
 P37557A.D
 Injection Time:
 15:17

Instrument ID: GCMSP Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	73631 147262 36816	8.89 9.39 8.39	133686 267372 66843	9.76 10.26 9.26	84623 169246 42312	13.01 13.51 12.51	73295 146590 36648	15.57 16.07 15.07	83094	6.49 6.99 5.99
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP1243-BS MSP1243-MB ZZZZZZ ZZZZZZ ZZZZZZ M83210-3 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ M83210-3MS M83210-3MSD M83376-1 M83376-6 M83376-6 M83376-8	73631 57615 55854 55608 51376 51604 53096 55287 62418 66620 72750 73965 66749 62142 59290 54524	8.89 8.90 8.89 8.90 8.89 8.89 8.89 8.89	133686 102993 103584 100905 96673 95844 95727 106595 115749 117505 134414 135611 119609 115225 107403 103420	9.76 9.76 9.76 9.76 9.77 9.76 9.76 9.76	84623 64772 64185 63098 60662 60314 60032 73487 83502 80190 83653 83952 73838 69719 68163 63791	13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01	59529 72094 69261 70507 71759 57527 53246 51310 47737	15.57 15.57 15.58 15.58 15.58 15.57 15.57 15.57 15.57 15.57 15.57 15.57 15.58 15.58	32987 26598 30497 31143 36406 42117 42061 41426 40629 39148 31699 32748 33059	6.49 6.52 6.52 6.51 6.54 6.52 6.52 6.52 6.50 6.51 6.50 6.51 6.52 6.51 6.52
M83376-10 M83376-12 M83376-14 ZZZZZZZ	54993 54109 52579 46092	8.90 8.90 8.90 8.90	100632 100369 98384 84196	9.76 9.76 9.77 9.77	62234 62418 61013 54047	13.01 13.01 13.01 13.01	46710 45725 44982 38076		31143 32540 31018 32347	6.52 6.51 6.51 6.51

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



Volatile Surrogate Recovery Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Method: SW846 8260B Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab			
Sample ID	File ID	S1	S2	S3
M83376-1	P37571.D	96.0	100.0	102.0
M83376-3	P37572.D	99.0	99.0	104.0
M83376-5	N34527.D	115.0	101.0	94.0
M83376-6	P37573.D	98.0	101.0	106.0
M83376-8	P37574.D	103.0	98.0	105.0
M83376-10	P37575.D	102.0	100.0	104.0
M83376-12	P37576.D	101.0	100.0	105.0
M83376-14	P37577.D	104.0	99.0	106.0
M83210-3MS	P37569.D	93.0	99.0	104.0
M83210-3MSD	P37570.D	94.0	98.0	102.0
M83428-1MS	N34529.D	108.0	101.0	91.0
M83428-1MSD	N34530.D	109.0	99.0	91.0
MSN1279-BS	N34523A.D	106.0	99.0	89.0
MSN1279-MB	N34525.D	111.0	99.0	95.0
MSP1243-BS	P37557A.D	90.0	100.0	100.0
MSP1243-MB	P37560.D	98.0	101.0	107.0

Surrogate Recovery Compounds Limits

 $\mathbf{S1} = \text{Dibromofluoromethane}$ 70-130% $\mathbf{S2} = \text{Toluene-D8}$ 70-130% $\mathbf{S3} = 4\text{-Bromofluorobenzene}$ 70-130%





GC Semi-volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



Method: CT-ETPH 7/06

Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample OP18693-MB	File ID BC27933.D	DF 1	Analyzed 06/16/09	By DG	Prep Date 06/09/09	Prep Batch OP18693	Analytical Batch GBC1514

The QC reported here applies to the following samples:

M83376-1, M83376-3, M83376-6, M83376-8, M83376-10, M83376-12, M83376-14

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 68% 50-149%



Method: SW846 8082

Method Blank Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample OP18709-MB	File ID BB26187.D	DF 1	Analyzed 06/16/09	By CZ	Prep Date 06/10/09	Prep Batch OP18709	Analytical Batch GBB1074

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	97%	30-150%
877-09-8	Tetrachloro-m-xylene	87%	30-150%
2051-24-3	Decachlorobiphenyl	54%	30-150%
2051-24-3	Decachlorobiphenyl	46%	30-150%



Method: CT-ETPH 7/06

Blank Spike Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC:Willow Brook & Pond 2008 Monitoring

Sample OP18693-BS	File ID BC27934.D	DF 1	Analyzed 06/16/09	By DG	Prep Date 06/09/09	Prep Batch OP18693	Analytical Batch GBC1514

The QC reported here applies to the following samples:

M83376-1, M83376-3, M83376-6, M83376-8, M83376-10, M83376-12, M83376-14

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.692	99	60-120

CAS No. Surrogate Recoveries BSP Limits
3386-33-2 1-Chlorooctadecane 66% 50-149%



Method: SW846 8082

Blank Spike Summary Job Number: M83376

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:**

Sample OP18709-BS	File ID BB26195.D	DF 1	Analyzed 06/16/09	By CZ	Prep Date 06/10/09	Prep Batch OP18709	Analytical Batch GBB1074

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.0	100	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.9	95	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	Surrogate Recoveries	BSP	Limits
877-09-8	Tetrachloro-m-xylene	104%	30-150%
877-09-8	Tetrachloro-m-xylene	95%	30-150%
2051-24-3	Decachlorobiphenyl	58%	30-150%
2051-24-3	Decachlorobiphenyl	50%	30-150%



Method: CT-ETPH 7/06

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
OP18693-MS	BC27935.D	1	06/16/09	DG	06/09/09	OP18693	GBC1514
OP18693-MSD	BC27936.D	1	06/16/09	DG	06/09/09	OP18693	GBC1514
M83410-5	BC27938.D	1	06/16/09	DG	06/09/09	OP18693	GBC1514

The QC reported here applies to the following samples:

CAS No.	Compound	M83410-5 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.698	100	0.701	100	0	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M83	3410-5	Limits			
3386-33-2	1-Chlorooctadecane	80%	77%	84%	, D	50-149%)		



Method: SW846 8082

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
OP18709-MS	BB26196.D	1	06/16/09	CZ	06/10/09	OP18709	GBB1074
OP18709-MSD	BB26197.D	1	06/16/09	CZ	06/10/09	OP18709	GBB1074
M83410-9	BB26198.D	1	06/16/09	CZ	06/10/09	OP18709	GBB1074

The QC reported here applies to the following samples:

CAS No. Compound	M83410-9 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 Aroclor 1016	ND	2	1.8	90	2.0	100	11	40-140/50
11104-28-2 Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 Aroclor 1260	ND	2	1.7	85	1.9	95	11	40-140/50
37324-23-5 Aroclor 1262	ND		ND		ND		nc	40-140/50
11100-14-4 Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	M83410-9	Limits
877-09-8	Tetrachloro-m-xylene	92%	101%	97%	30-150%
877-09-8	Tetrachloro-m-xylene	85%	93%	89%	30-150%
2051-24-3	Decachlorobiphenyl	48%	58%	58%	30-150%
2051-24-3	Decachlorobiphenyl	42%	50%	52%	30-150%



Semivolatile Surrogate Recovery Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Method: CT-ETPH 7/06 Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab	
Sample ID	File ID	S1 a
1.60207.6.1	DC25052 D	67.0
M83376-1	BC27952.D	67.0
M83376-3	BC27953.D	80.0
M83376-6	BC27954.D	80.0
M83376-8	BC27955.D	87.0
M83376-10	BC27956.D	80.0
M83376-12	BC27957.D	74.0
M83376-14	BC27958.D	81.0
OP18693-BS	BC27934.D	66.0
OP18693-MB	BC27933.D	68.0
OP18693-MS	BC27935.D	80.0
OP18693-MSD	BC27936.D	77.0

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



Semivolatile Surrogate Recovery Summary

Job Number: M83376

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Method: SW846 8082 Matrix: AQ

Samples and QC shown here apply to the above method

Lab	Lab				
Sample ID	File ID	S1 a	S1 b	S2 a	S2 b
M83376-1	EF68557.D	93.0	91.0	60.0	60.0
M83376-3	EF68558.D	92.0	89.0	73.0	72.0
M83376-6	EF68559.D	104.0	103.0	88.0	84.0
M83376-8	EF68560.D	104.0	105.0	87.0	86.0
M83376-10	EF68561.D	108.0	105.0	76.0	74.0
M83376-12	EF68572.D	100.0	90.0	75.0	78.0
M83376-14	EF68574.D	102.0	104.0	89.0	90.0
OP18709-BS	BB26195.D	104.0	95.0	58.0	50.0
OP18709-MB	BB26187.D	97.0	87.0	54.0	46.0
OP18709-MS	BB26196.D	92.0	85.0	48.0	42.0
OP18709-MSD	BB26197.D	101.0	93.0	58.0	50.0

Surrogate Recovery Compounds Limits

S1 = Tetrachloro-m-xylene 30-150% **S2** = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1(b) Recovery from GC signal #2





Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M83376

Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13617 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/09/09

Associated samples MP13617: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M83376 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13617 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

06/09/09 06/09/09 Prep Date:

Metal	M83316-6 Original		Spikelot HGRWS1		QC Limits	M83316-6 Original		RPD	QC Limits
Mercury	0.0	2.9	3	96.7	75-125	0.0	0.0	NC	0-20

Associated samples MP13617: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\hfill \hfill \h$

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M83376
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13617 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/1

Prep Date: 06/09/09 06/09/09

Metal	BSP Result	Spikelot HGRWS1		QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.0	3	100.0	80-120	3.0	3	100.0	0.0	20

Associated samples MP13617: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $% \left(\frac{1}{2}\right) =0$

(anr) Analyte not requested

BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M83376 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	31		
Antimony	6.0	2.9	3		
Arsenic	10	2.7	3.2	-0.080	<10
Barium	200	.64	1.2	0.53	<200
Beryllium	4.0	.17	.3		
Boron	100	2.3	4.8		
Cadmium	4.0	. 24	.3	0.26	<4.0
Calcium	5000	4.7	40		
Chromium	10	.51	1.4	0.11	<10
Cobalt	50	.76	1		
Copper	25	1.1	1.8	-1.0	<25
Iron	100	11	29		
Lead	5.0	1.3	1.8	1.4	<5.0
Magnesium	5000	8	10		
Manganese	15	.17	1.3		
Molybdenum	100	. 5	1.4		
Nickel	40	.65	1	0.29	<40
Potassium	5000	25	31		
Selenium	10	1.6	3.3	-1.5	<10
Silver	5.0	.64	.7	0.40	<5.0
Sodium	5000	99	210		
Strontium	10	.12	.3		
Thallium	10	2	4.5		
Tin	100	1.6	9.9		
Titanium	50	4.1	5.1		
Tungsten	100	5.4	7		
Vanadium	30	.65	3.5		
Zinc	20	1.1	1.3	0.24	<20

Associated samples MP13622: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits $\dot{}$

(anr) Analyte not requested



MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M83376 Account: LEA - Loureiro Eng. Associates Project: UTC: Willow Brook & Pond 2008 Monitoring

OC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/09 06/10/09 M83376-4 M83376-4 Spikelot QC QC MPICP Limits Original DUP Limits Metal Original MS % Rec RPD Aluminum Antimony Arsenic 0.0 519 500 103.8 75-125 0.0 0.0 NC: 0-20 Barium 266 2260 2000 99.7 75-125 266 268 0.7 0-20 Beryllium Boron Cadmium 1.2 503 500 100.4 75-125 1.2 1.5 22.2 (a) 0-20 Calcium Chromium 2.0 491 500 97.8 75-125 2.0 1.9 5.1 0-20 Cobalt Copper 20.7 500 106.5 75-125 20.7 20.8 0-20 Iron 0.0 1010 1000 101.0 75-125 0.0 2.1 200.0(a) 0-20 Lead Magnesium Manganese Molybdenum Nickel 89.0 584 500 99.0 75-125 89.0 89.3 0.3 0-20 Potassium Selenium 200.0(a) 0-20 2.2 527 500 105.0 75-125 2.2 0.0 Silver 0.0 210 200 105.0 75-125 0.0 0.0 0-20 Sodium Strontium Thallium Tin Titanium Tungsten Vanadium 4.2 514 500 102.0 75-125 4.2 4.3 2.4 0-20

Associated samples MP13622: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes

Zinc

^(*) Outside of QC limits

⁽N) Matrix Spike Rec. outside of QC limits

⁽anr) Analyte not requested

⁽a) RPD acceptable due to low duplicate and sample concentrations.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M83376
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/10/09 06/10/09 BSP Spikelot BSD Spikelot BSD QC OC MPICP Limits Limit Metal Result % Rec Result MPICP % Rec RPD Aluminum Antimony 507 101.4 500 Arsenic 500 80-120 512 102.4 1.0 2.0 1990 Barium 2000 99.5 80-120 1990 2000 99.5 0.0 20 Beryllium Boron Cadmium 494 500 98.8 80-120 504 500 100.8 2.0 20 Calcium Chromium 485 500 97.0 80-120 492 500 98.4 1.4 20 Cobalt Copper 514 500 102.8 80-120 500 103.6 0.8 20 Iron 998 1000 99.8 80-120 1010 1000 101.0 1.2 20 Lead Magnesium Manganese Molybdenum Nickel 486 500 97.2 80-120 495 500 99.0 1.8 20 Potassium Selenium 500 103.4 104.6 517 80-120 523 500 1.2 2.0 Silver 206 200 103.0 80-120 209 200 104.5 1.4 20 Sodium Strontium Thallium Tin Titanium Tungsten Vanadium 497 500 99.4 80-120 509 500 101.8 2.4 Zinc

Associated samples MP13622: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: M83376 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

06/10/09 Prep Date:

Metal	M83376-4 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	266	262	1.5	0-10
Beryllium				
Boron				
Cadmium	1.24	2.97	139.5(a)	0-10
Calcium				
Chromium	1.95	4.03	106.7(a)	0-10
Cobalt				
Copper	20.7	12.0	41.9 (a)	0-10
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	89.0	89.3	0.3	0-10
Potassium				
Selenium	2.16	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	4.15	0.00	100.0(a)	0-10

Associated samples MP13622: M83376-2, M83376-4, M83376-7, M83376-9, M83376-11, M83376-13, M83376-15

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).







06/26/09

06/26/09







Technical Report for

Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring

88UT907

Accutest Job Number: M83376R

Sampling Date: 06/04/09

Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: 30





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

NY (11791) NJ (MA926) PA (68-01121) NC (653) IL (200018) NAVY USACE

This report shall not be reproduced, except in its entirety, without the written approval of Accutest Laboratories. Test results relate only to samples analyzed.

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)

Lab Director

Sections:

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5.2: Prep QC MP13693: Hg	28



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Sample Summary

Loureiro Eng. Associates

Job No: M83376R

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample	Collected			Matrix	Client
Number	Date	Time By	Received	Code Type	Sample ID
M83376-1R	06/04/09	12:00 SK	06/04/09	AQ Ground Water	1123432





SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M83376R

Site: UTC:Willow Brook & Pond 2008 Monitoring Report Date 6/26/2009 5:03:49 PM

1 Sample was collected on 06/04/2009 and were received at Accutest on 06/04/2009 properly preserved, at 2.1 Deg. C and intact. These Samples received an Accutest job number of M83376R. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

Metals By Method SW846 6010B

Matrix AQ Batch ID: MP13688

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83766-2DUP, M83766-2MS, M83766-2DUP, M83766-2DUP were used as the QC samples for metals.
- RPD(s) for Duplicate for Cadmium, Nickel are outside control limits for sample MP13688-D1. RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Serial Dilution for Nickel, Zinc are outside control limits for sample MP13688-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Only selected metals requested.

Metals By Method SW846 7470A

Matrix AQ Batch ID: MP13693

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83572-4DUP, M83572-4MS were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M83376R).

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Report of Analysis



Report of Analysis

Page 1 of 1

Client Sample ID: 1123432 Lab Sample ID: **Date Sampled:** 06/04/09 M83376-1R Matrix: **Date Received:** 06/04/09 AQ - Ground Water

Percent Solids: n/a **Project:** UTC:Willow Brook & Pond 2008 Monitoring

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
							2	2
Arsenic	8.9	4.0	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	06/23/09	06/24/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	06/22/09	06/25/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10613 (2) Instrument QC Batch: MA10626 (3) Prep QC Batch: MP13688 (4) Prep QC Batch: MP13693



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



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M83376R: Chain of Custody
Page 5 of 9



ACCUTES	3T.

# CHAIN OF CUSTODY 495 TECHNOLOGY CENTER WEST * BUILDING ONE MARIL POROUGH, MA 01752 TEL: 508-481-6200 * FAX: 508-481-7753

ACCUTEST JOB #:	M83376
ACCUTEST QUOTE #:	Limit Quadratic L

Michigan parts of the second second	CLIENT INFORMATION		FACILITY INFORMATION						T	ON TOTAL	27.830	ANA	LYTI	CAL I	NFOR	AAT:O	N	*****	MATRIX CODES	
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M83376R: Chain of Custody Page 6 of 9





Page 7 of 9

**Betty Baer** 

m 23376

From:

Kristen Blanchard

Sent:

Friday, June 05, 2009 8:43 AM

To:

Betty Baer

Subject:

FW: Modifications to P&W Willow Pond COC

Attachments: Willow Pond Modifications to COC.pdf

### Kristen Blanchard

Accutest Laboratories of New England

Accutest - "The national Testing Laboratory with Total Performance you can count on" Please consider the environment before printing this email.

From: Robin McKinney [mailto:rlmckinney@loureiro.com]

Sent: Friday, June 05, 2009 8:41 AM To: Kristen Blanchard; Scott Parsick

Subject: Modifications to P&W Willow Pond COC

Kristen / Scott,

After reviewing the chain of custody for the P&W Willow Pond groundwater samples, that were submitted yesterday, I identified a few corrections. The corrections are as follows:

-Please take sample 1123432 off hold and analyze for Total RCRA 8 Metals, Cu, Ni, Zn

-Please analyze samples identified as 1123426 for VOCs 8260B, CT ETPH, PCBs 8082 and Total RCRA 8

Metals, Cu, Ni, Zn

-In addition to the Total RCRA 8 Metals, Cu, Ni, Zn analysis, please analyze sample 1123428 for VOCs 8260B,

CT ETPH, and PCBs 8082

I attached the modified COC for your file. Please feel free to give me a call at (860) 410-3000 with any questions.

Thanks,

Robin L. McKinney, Project Scientist Loureiro Engineering Associates, Inc. An Employee Owned Company 100 Northwest Drive Plainville, CT 06062 860.747.6181 860.410.3000 Direct 860.747.8822 Fax rlmckinney@loureiro.com

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6/5/2009

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M83376R: Chain of Custody

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6/5/2009



M83376R: Chain of Custody
Page 9 of 9

### Frank D'Agostino

M83374R

From:

Robin McKinney [rlmckinney@loureiro.com]

Sent:

Friday, June 05, 2009 1:54 PM

To:

Frank D'Agostino

Subject:

P&W Willow Pond Amended COC

Attachments: Willow Pond Modifications to COC.pdf

Frank

Please take sample 1123432 off hold and analyze for Total RCRA 8 Metals, Cu, Ni and Zn. Please analyze sample1123426 for VOCs 8260B, CT ETPH, PCBs 8082 and Total RCRA 8 Metals, Cu, Ni and Zn.

Please analyze sample 1123428 for VOCs 8260B, CT ETPH, PCBs 8082, in addition to Total RCRA 8 Metals, Cu, Ni and Zn.

(The 1123428 sample analyzed for metals should be identified as 1123428uf as we discussed).

If you have any questions, feel free to give me a call.

Thanks.

Robin L. McKinney, Project Scientist Loureiro Engineering Associates, Inc. An Employee Owned Company 100 Northwest Drive Plainville, CT 06062 860.747.6181 860.410.3000 Direct 860.747.8822 Fax rimckinney@loureiro.com

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6/26/2009



### Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

Client:

**Project Number:** 

Loureiro Eng. Associates

88UT624

**Accutest New England** 

Monitoring

UTC:Willow Brook & Pond 2008

**Laboratory Name:** 

**Project Location:** 

ethods:	SW846 6010B, SW846 7470A		
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes 🔽	No 🗀
1A	Where all the method specified preservation and holding time requirements met?	Yes 🗹	No [
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes 🗖	No [
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes 🔽	No [
3	Were samples received at an appropriate temperature (<6° C)?	Yes 🔽	No [
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes 🗖	No 🗹
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🗹	No [
	b) Were these reporting limits met?	Yes 🗖	No E
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🗖	No 🗹
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes 🔽	No [

l, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belief and based upon my personal inquiry of those responsible for providing the information contained in this

Position: Lab Director

6/26/2009

Date:

analytical report, such information is accurate and complete.

Accutest New England

Authorized Signature:

Printed Name: Reza Tand



## **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

M83376R Job No:

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M83376-1F 1123432	Collected: 04-JUN-09	12:00 By: SK	Receiv	ved: 04-JUN-	-09 By	
	2 SW846 7470A 2 SW846 6010B	24-JUN-09 11:44 25-JUN-09 14:01		23-JUN-09 22-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SI ZN





### Metals Analysis

### QC Data Summaries

## Includes the following where applicable:

- · Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



### BLANK RESULTS SUMMARY Part 2 - Method Blanks

## Login Number: M83376R Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Matrix Type: AQUEOUS Methods: SW846 6010B

Units: ug/l

Prep Date:

06/22/09

Y	D.		MT -	MB	6
Metal	RL	IDL	MDL	raw	final
Aluminum	200	27	40		
Antimony	6.0	1.4	1.6		.10
Arsenic	10	1	1.8	-1.4	<10
Barium	200	. 57	1.1	0.90	<200
Beryllium	4.0	.15	. 4		
Boron	100	.65	2.3		
Cadmium	4.0	.24	1.9	0.0	<4.0
Calcium	5000	7.6	15		
Chromium	10	.81	1.1	-0.40	<10
Cobalt	50	. 25	.3		
Copper	25	2.2	4	3.5	<25
Gold	50	1.1	4.2		
Iron	100	3.7	13		
Lead	5.0	1.1	2.7	0.10	<5.0
Magnesium	5000	37	77		
Manganese	15	.12	1.1		
Molybdenum	100	.22	.8		
Nickel	40	. 24	1.3	-0.10	<40
Palladium	50	2.2	4		
Platinum	50	9.3	13		
Potassium	5000	39	46		
Selenium	10	1.9	3.5	0.20	<10
Silicon	100	8.9	36		
Silver	5.0	.54	1.3	0.0	<5.0
Sodium	5000	61	160		
Strontium	10	. 24	.3		
Thallium	10	1.2	1.3		
Tin	100	.65	1.3		
Titanium	50	.74	.8		
Tungsten	100	5.6	8		
Vanadium	30	.68	1.6		
Zinc	20	.74	1.5	0.0	<20
21110	20	./=	1.5	0.0	120

Associated samples MP13688: M83376-1R



### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M83376R

Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



21 of 30

### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

## Login Number: M83376R Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

Methods: SW846 6010B Units: ug/l

Prep Date: 06/22/09 06/22/09

QC Batch ID: MP13688

Matrix Type: AQUEOUS

rrep bace.				00/22/03				00/22/09	
Metal	M83766-2 Original		Spikelot MPICP	% Rec	QC Limits	M83766-2 Original		RPD	QC Limits
Aluminum									
Antimony	anr								
Arsenic	0.0	520	500	104.0	75-125	0.0	0.0	NC	0-20
Barium	65.8	2040	2000	98.7	75-125	65.8	66.8	1.5	0-20
Beryllium	anr								
Boron									
Cadmium	0.0	518	500	103.6	75-125	0.0	0.30	200.0(a)	0-20
Calcium									
Chromium	0.0	494	500	98.8	75-125	0.0	0.0	NC	0-20
Cobalt									
Copper	0.0	508	500	101.6	75-125	0.0	0.0	NC	0-20
Gold									
Iron	anr								
Lead	0.0	1010	1000	101.0	75-125	0.0	0.0	NC	0-20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	0.50	497	500	99.3	75-125	0.50	0.70	33.3 (a)	0-20
Palladium									
Platinum									
Potassium									
Selenium	0.0	531	500	106.2	75-125	0.0	0.0	NC	0-20
Silicon									
Silver	0.0	204	200	102.0	75-125	0.0	0.0	NC	0-20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	6.9	512	500	101.0	75-125	6.9	6.8	1.5	0-20
Associated sam	nnleg MD13	1688: M833	R76-1R						

Associated samples MP13688: M83376-1R



## 5.1.2

### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M83376R
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) RPD acceptable due to low duplicate and sample concentrations.

### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

## Login Number: M83376R Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/1

Prep Date:	06/22/09	06/22/09
------------	----------	----------

Prep Date.			06/22/09					06/22/09	1
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	520	500	104.0	80-120	523	500	104.6	0.6	20
Barium	2020	2000	101.0	80-120	2030	2000	101.5	0.5	20
Beryllium	anr								
Boron									
Cadmium	519	500	103.8	80-120	534	500	106.8	2.8	20
Calcium									
Chromium	501	500	100.2	80-120	507	500	101.4	1.2	20
Cobalt									
Copper	510	500	102.0	80-120	523	500	104.6	2.5	20
Gold									
Iron	anr								
Lead	1030	1000	103.0	80-120	1040	1000	104.0	1.0	20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	503	500	100.6	80-120	504	500	100.8	0.2	20
Palladium									
Platinum									
Potassium									
Selenium	533	500	106.6	80-120	542	500	108.4	1.7	20
Silicon									
Silver	206	200	103.0	80-120	207	200	103.5	0.5	20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium	anr								
Zinc	511	500	102.2	80-120	525	500	105.0	2.7	20
Associated sar	mples MP1	3688: M833	76-1R						



### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M83376R Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

Page 2



### SERIAL DILUTION RESULTS SUMMARY

## Login Number: M83376R Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/22/09

Metal	M83766-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium	65.8	68.4	4.0	0-10
Beryllium	anr			
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	0.00	0.00	NC	0-10
Gold				
Iron	anr			
Lead	0.00	9.40		0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	0.500	0.00	100.0(a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Titanium	anr			

Associated samples MP13688: M83376-1R

# 5.7.4

### SERIAL DILUTION RESULTS SUMMARY

Login Number: M83376R
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13688 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M83376R

Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13693 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/23/09

Associated samples MP13693: M83376-1R

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M83376R Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13693 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

06/23/09 06/23/09 Prep Date:

Metal	M83572-4 Original		Spikelot HGRWS1	% Rec	QC Limits	M83572-4 Original		RPD	QC Limits
Mercury	0.0	2.8	3	93.3	75-125	0.0	0.0	NC	0-20

Associated samples MP13693: M83376-1R

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\hfill \hfill$ 

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested



# 5.2.3

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M83376R
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP13693 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/23/09 06/23/09

Metal	BSP Result	Spikelot HGRWS1		QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.9	3	96.7	0.0	20

Associated samples MP13693: M83376-1R

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested





07/07/09

07/07/09



### Technical Report for

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M83394

Sampling Date: 06/05/09

### Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: 113





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579) NY (11791) NJ (MA926) PA (68-01121) NC (653) IL (200018) NAVY USACE

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Lab Director

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### **Sample Summary**

Job No:

M83394

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
M83394-1	06/05/09	10:45 NE	06/05/09	AQ	Ground Water	1123427
M83394-2	06/05/09	10:45 NE	06/05/09	AQ	Ground Water	1123427UF
M83394-3	06/05/09	12:15 NE	06/05/09	AQ	Ground Water	1123436
M83394-4	06/05/09	12:15 NE	06/05/09	AQ	Ground Water	1123436UF
M83394-5	06/05/09	14:20 NE	06/05/09	AQ	Ground Water	1123437
M83394-6	06/05/09	14:20 NE	06/05/09	AQ	Ground Water	1123437UF
M83394-7	06/05/09	11:05 SK	06/05/09	AQ	Ground Water	1123434
M83394-8	06/05/09	11:05 SK	06/05/09	AQ	Ground Water	1123434UF
M83394-9	06/05/09	13:10 SK	06/05/09	AQ	Ground Water	1123435
M83394-10	06/05/09	13:10 SK	06/05/09	AQ	Ground Water	1123435UF
M83394-11	06/05/09	08:30 NE	06/05/09	AQ	Ground Water	1123443
M83394-12	06/05/09	14:30 NE	06/05/09	AQ	Ground Water	1123444
M83394-13	06/05/09	14:30 NE	06/05/09	AQ	Ground Water	1123444UF





# Sample Summary (continued)

Job No:

M83394

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
M83394-14	06/05/09	14:40 RD	06/05/09	AQ	Ground Water	1123441
M83394-15	06/05/09	14:40 RD	06/05/09	AQ	Ground Water	1123441UF
M83394-16	06/05/09	10:25 RD	06/05/09	AQ	Ground Water	1123438
M83394-17	06/05/09	10:25 RD	06/05/09	AQ	Ground Water	1123438UF
M83394-18	06/05/09	10:25 RD	06/05/09	AQ	Ground Water	1123439
M83394-19	06/05/09	10:25 RD	06/05/09	AQ	Ground Water	1123439UF
M83394-20	06/05/09	13:00 RD	06/05/09	AQ	Ground Water	1123440
M83394-21	06/05/09	13:00 RD	06/05/09	AO	Ground Water	1123440UF





#### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M83394

**Site:** UTC: 2009 Quarterly GW-Willow Pond **Report Date** 6/19/2009 2:47:49 PM

21 Sample(s) were collected on 06/05/2009 and were received at Accutest on 06/05/2009 properly preserved, at 2.5 Deg. C and intact. These Samples received an Accutest job number of M83394. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

#### Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSP1247

- All samples were analyzed within the recommended method holding time.
- Sample(s) M83394-14MS, M83394-14MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2,2-Dichloropropane, Acetone, Tetrahydrofuran are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for Acrylonitrile, Chloromethane, Naphthalene, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for Acrylonitrile, Chloromethane, Vinyl chloride are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Blank Spike Duplicate Recovery(s) for Acetone, Tetrahydrofuran are outside control limits. Blank Spike meets program technical requirements.
- RPD for MSP1247-BSD for 2,2-Dichloropropane: Outside control limits. Blank Spike meets program technical requirements.
- Continuing calibration check standard for acetone, acrylonitrile, 2,2-dichloropropane exceed 30% Difference. This check standard met RCP criteria.
- Initial calibration standard in batch MSP1243 for acetone, 2,2-dichloropropane is employed quadratic regression.
- MS/MSD for Tetrahydrofuran are outside control limits. Blank Spike meets program technical requirements.

Matrix AQ Batch ID: MSP1249

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83437-16MS, M83437-16MSD were used as the QC samples indicated.

#### Extractables by GC By Method CT-ETPH 7/06

Matrix AQ Batch ID: OP18694

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83410-6MS, M83410-6MSD were used as the QC samples indicated.

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Friday, June 19, 2009 Page 1 of 2

### Extractables by GC By Method SW846 8082

Matrix AQ Batch ID: OP18727

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M83410-16MS, M83410-16MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

#### Metals By Method SW846 6010B

Matrix AQ Batch ID: MP13622

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83376-4DUP, M83376-4MS, M83376-4SDL were used as the QC samples for metals.
- RPD(s) for Duplicate for Cadmium, Lead, Selenium are outside control limits for sample MP13622-D1. RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Serial Dilution for Cadmium, Chromium, Copper, Selenium, Zinc are outside control limits for sample MP13622-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</p>
- Only selected metals requested.

### Metals By Method SW846 7470A

Matrix AQ Batch ID: MP13617

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M83316-6DUP, M83316-6MS were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M83394).

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Sample	e Resul	ts



Client Sample ID: 1123427

 Lab Sample ID:
 M83394-1
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37637.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.2	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	23.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	15.5	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1123427

 Lab Sample ID:
 M83394-1
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	2.6	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	2.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	6.9	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	24.1	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	j

119%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%





Client Sample ID: 1123427

 Lab Sample ID:
 M83394-1
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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### **Report of Analysis**

Client Sample ID: 1123427

 Lab Sample ID:
 M83394-1
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27993.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Initial Volume Final Volume
Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.763 0.084 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 53% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1123427

Lab Sample ID: M83394-1 **Date Sampled:** 06/05/09 Matrix: AQ - Ground Water **Date Received:** 06/05/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By GBB1076 Run #1 BB26261.D 1 06/18/09 CZ06/12/09 OP18727

Run #2

**Initial Volume Final Volume** 

Run #1 860 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.29	ug/l	
11104-28-2	Aroclor 1221	ND	0.29	ug/l	
11141-16-5	Aroclor 1232	ND	0.29	ug/l	
53469-21-9	Aroclor 1242	ND	0.29	ug/l	
12672-29-6	Aroclor 1248	ND	0.29	ug/l	
11097-69-1	Aroclor 1254	ND	0.29	ug/l	
11096-82-5	Aroclor 1260	ND	0.29	ug/l	
37324-23-5	Aroclor 1262	ND	0.29	ug/l	
11100-14-4	Aroclor 1268	ND	0.29	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	117%		30-1	50%
877-09-8	Tetrachloro-m-xylene	108%		30-1	50%
2051-24-3	Decachlorobiphenyl	92%		30-1	50%
2051-24-3	Decachlorobiphenyl	84%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



### Page 1 of 1

Client Sample ID: 1123427UF

Lab Sample ID:M83394-2Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Report of Analysis** 

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
							2	4
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	61.9	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	1660	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Client Sample ID: 1123436

 Lab Sample ID:
 M83394-3
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37638.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	32.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	7.3	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	62.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	3.3	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1123436 Lab Sample ID: M83394-3

 Lab Sample ID:
 M83394-3
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	81.1	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 119% 70-130%

 $ND = \ Not \ detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value





Client Sample ID: 1123436

 Lab Sample ID:
 M83394-3
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1123436

Lab Sample ID: M83394-3 Date Sampled: 06/05/09 Matrix: AQ - Ground Water Date Received: 06/05/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 Run #1 BC27994.D 1 06/18/09 WZ OP18694 GBC1516

Run #2

**Initial Volume Final Volume** Run #1 700 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> mg/lCT-DRO (C9-C36) 0.134 0.11

CAS No. Run# 2 **Surrogate Recoveries** Run# 1 Limits

1-Chlorooctadecane 3386-33-2 72% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123436

Lab Sample ID: M83394-3 **Date Sampled:** 06/05/09 Matrix: AQ - Ground Water **Date Received:** 06/05/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By GBB1076 Run #1 BB26262.D 1 06/18/09 CZ06/12/09 OP18727

Run #2

**Initial Volume Final Volume** Run #1 880 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	129%		30-1	50%
877-09-8	Tetrachloro-m-xylene	120%		30-1	50%
2051-24-3	Decachlorobiphenyl	123%		30-1	50%
2051-24-3	Decachlorobiphenyl	110%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Analysis Page 1 of 1

Client Sample ID: 1123436UF

Lab Sample ID:M83394-4Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	333	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Client Sample ID: 1123437

 Lab Sample ID:
 M83394-5
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	<b>Analytical Batch</b>
Run #1	P37655.D	1	06/12/09	AMY	n/a	n/a	MSP1247
Run #2	P37710.D	10	06/17/09	AMY	n/a	n/a	MSP1249

	Purge Volume	
Run #1	5.0 ml	
Run #2	5.0 ml	

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	6.2	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	42.7	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	17.2	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	9.1	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	141	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1123437 Lab Sample ID: M83394-5

 Lab Sample ID:
 M83394-5
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	5.8	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	354 a	10	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	6.2	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	388 a	10	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	45.2	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
1868-53-7	Dibromofluoromethane	123%	108%	70-1	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1123437

 Lab Sample ID:
 M83394-5
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	104%	99%	70-130%
460-00-4	4-Bromofluorobenzene	107%	107%	70-130%

(a) Result is from Run# 2

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1123437

Lab Sample ID: M83394-5 Date Sampled: 06/05/09 **Matrix:** AQ - Ground Water Date Received: 06/05/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 Run #1 BC27995.D 1 06/18/09 WZ OP18694 GBC1516

Run #2

**Initial Volume Final Volume** Run #1 900 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.452 0.089 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 61% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



**ysis** Page 1 of 1

Client Sample ID: 1123437

 Lab Sample ID:
 M83394-5
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BB26263.D 1 06/18/09 CZ 06/12/09 OP18727 GBB1076

Run #2

Initial Volume Final Volume

Run #1 910 ml 5.0 ml

Run #2

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l	
11104-28-2	Aroclor 1221	ND	0.27	ug/l	
11141-16-5	Aroclor 1232	ND	0.27	ug/l	
53469-21-9	Aroclor 1242	ND	0.27	ug/l	
12672-29-6	Aroclor 1248	ND	0.27	ug/l	
11097-69-1	Aroclor 1254	ND	0.27	ug/l	
11096-82-5	Aroclor 1260	ND	0.27	ug/l	
37324-23-5	Aroclor 1262	ND	0.27	ug/l	
11100-14-4	Aroclor 1268	ND	0.27	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
877-09-8	Tetrachloro-m-xylene	126%		30-1	50%
877-09-8	Tetrachloro-m-xylene	119%		30-1	50%
2051-24-3	Decachlorobiphenyl	124%		30-1	50%
2051-24-3	Decachlorobiphenyl	113%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1123437UF Lab Sample ID: M83394-6

**Date Sampled:** 06/05/09 **Date Received:** 06/05/09

Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

AQ - Ground Water

### **Metals Analysis**

Matrix:

Analyte	Result	RL	Units	DF	Prep	Analyzed By Method		Prep Method
	4.0	4.0			0.5/4.0/00	0.5/4.4/00	2	4
Arsenic	4.2	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	69.2	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	365	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560 (2) Instrument QC Batch: MA10567 (3) Prep QC Batch: MP13617 (4) Prep QC Batch: MP13622

Client Sample ID: 1123434

 Lab Sample ID:
 M83394-7
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37639.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



### Page 2 of 3

### **Report of Analysis**

Client Sample ID: 1123434

 Lab Sample ID:
 M83394-7
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	S

121%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%



## C

### **Report of Analysis**

Client Sample ID: 1123434

 Lab Sample ID:
 M83394-7
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	102%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1123434

Lab Sample ID: M83394-7 Date Sampled: 06/05/09 **Matrix:** AQ - Ground Water Date Received: 06/05/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By 06/09/09 Run #1 BC27996.D 1 06/18/09 WZ OP18694 GBC1516

Run #2

**Initial Volume Final Volume** Run #1 980 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.082 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 67% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123434

 Lab Sample ID:
 M83394-7
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BB26265.D 1 06/18/09 CZ 06/12/09 OP18727 GBB1076

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	119%		30-1	50%
877-09-8	Tetrachloro-m-xylene	111%		30-1	50%
2051-24-3	Decachlorobiphenyl	118%		30-1	50%
2051-24-3	Decachlorobiphenyl	108%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1123434UF

Lab Sample ID:M83394-8Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	234	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 M	A SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Client Sample ID: 1123435

 Lab Sample ID:
 M83394-9
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37640.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	6.5	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1123435

 Lab Sample ID:
 M83394-9
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 125% 70-130%

 $ND = \ Not \ detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



# C

## **Report of Analysis**

Client Sample ID: 1123435

 Lab Sample ID:
 M83394-9
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Page 1 of 1

## **Report of Analysis**

Client Sample ID: 1123435

Lab Sample ID:M83394-9Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27997.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.084 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 50% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1123435 Lab Sample ID: M83394-9

**Date Sampled:** 06/05/09 Matrix: AQ - Ground Water **Date Received:** 06/05/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By GBB1076 Run #1 BB26266.D 1 06/18/09 CZ06/12/09 OP18727

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	131%		30-1	50%
877-09-8	Tetrachloro-m-xylene	124%		30-1	50%
2051-24-3	Decachlorobiphenyl	130%		30-1	50%

120%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 1 of 1

Client Sample ID: 1123435UF

Lab Sample ID:M83394-10Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A 4
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Page 1 of 3

Client Sample ID: 1123443

 Lab Sample ID:
 M83394-11
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37641.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 2 of 3

Client Sample ID: 1123443

 Lab Sample ID:
 M83394-11
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	S

123%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 3 of 3

Client Sample ID: 1123443

 Lab Sample ID:
 M83394-11
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	103%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 3

Client Sample ID: 1123444

 Lab Sample ID:
 M83394-12
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37642.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 2 of 3

Client Sample ID: 1123444

Lab Sample ID: M83394-12 **Date Sampled:** 06/05/09 Matrix: **Date Received:** 06/05/09 AQ - Ground Water Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	ts

1868-53-7 Dibromofluoromethane 127% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 3 of 3

Client Sample ID: 1123444

Lab Sample ID: M83394-12 **Date Sampled:** 06/05/09 Matrix: **Date Received:** 06/05/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	104%		70-130%
460-00-4	4-Bromofluorobenzene	107%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1123444

 Lab Sample ID:
 M83394-12
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC27999.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Initial Volume Final Volume

Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 50% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123444

Lab Sample ID: M83394-12 **Date Sampled:** 06/05/09 Matrix: AQ - Ground Water **Date Received:** 06/05/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By GBB1076 Run #1 BB26267.D 1 06/18/09 CZ06/12/09 OP18727

Run #2

**Initial Volume Final Volume** 

Run #1 950 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l
11104-28-2	Aroclor 1221	ND	0.26	ug/l
11141-16-5	Aroclor 1232	ND	0.26	ug/l
53469-21-9	Aroclor 1242	ND	0.26	ug/l
12672-29-6	Aroclor 1248	ND	0.26	ug/l
11097-69-1	Aroclor 1254	ND	0.26	ug/l
11096-82-5	Aroclor 1260	ND	0.26	ug/l
37324-23-5	Aroclor 1262	ND	0.26	ug/l
11100-14-4	Aroclor 1268	ND	0.26	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	119%		30-150%
877-09-8	Tetrachloro-m-xylene	114%		30-150%
2051-24-3	Decachlorobiphenyl	82%		30-150%
2051-24-3	Decachlorobiphenyl	76%		30-150%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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Client Sample ID: 1123444UF

Lab Sample ID:M83394-13Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Page 1 of 3

Client Sample ID: 1123441

 Lab Sample ID:
 M83394-14
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Run #1 P37643.D DF Analyzed By Prep Date Prep Batch Analytical Batch n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 2 of 3

Client Sample ID: 1123441

 Lab Sample ID:
 M83394-14
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q	)
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	

130%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1123441

 Lab Sample ID:
 M83394-14
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	106%		70-130%
460-00-4	4-Bromofluorobenzene	105%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 

N = Indicates presumptive evidence of a compound



c

Page 1 of 1

Client Sample ID: 1123441

 Lab Sample ID:
 M83394-14
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC28000.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Initial Volume Final Volume

Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 62% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123441

Lab Sample ID: M83394-14 **Date Sampled:** 06/05/09 Matrix: AQ - Ground Water **Date Received:** 06/05/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By GBB1076 Run #1 BB26268.D 1 06/18/09 CZ06/12/09 OP18727

Run #2

**Initial Volume Final Volume** 

Run #1 950 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	120%		30-1	50%
877-09-8	Tetrachloro-m-xylene	114%		30-1	50%
2051-24-3	Decachlorobiphenyl	124%		30-1	50%
2051-24-3	Decachlorobiphenyl	115%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1123441UF

Lab Sample ID:M83394-15Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A 4
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

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Client Sample ID: 1123438

 Lab Sample ID:
 M83394-16
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch
Run #1	P37656.D	1	06/12/09	AMY	n/a	n/a	MSP1247
Run #2	P37711.D	10	06/17/09	AMY	n/a	n/a	MSP1249

	Purge Volume	
Run #1	5.0 ml	
Run #2	5.0 ml	

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q	
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	0.56	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.4	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	5.0	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	49.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	59.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1123438

 Lab Sample ID:
 M83394-16
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	37.3	1.0	ug/l	
109-99-9	Tetrahydrofuran	24.1	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	4.3	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	296 a	10	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	18.4	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	118%	110%	70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1123438

 Lab Sample ID:
 M83394-16
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	106%	102%	70-130%
460-00-4	4-Bromofluorobenzene	106%	109%	70-130%

(a) Result is from Run# 2

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1123438

 Lab Sample ID:
 M83394-16
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC28001.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Initial Volume Final Volume

Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.290 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 60% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

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Page 1 of 1

Client Sample ID: 1123438

 Lab Sample ID:
 M83394-16
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BB26269.D 1 06/18/09 CZ 06/12/09 OP18727 GBB1076

Run #2

Initial Volume Final Volume

Run #1 940 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.27	ug/l
11104-28-2	Aroclor 1221	ND	0.27	ug/l
11141-16-5	Aroclor 1232	ND	0.27	ug/l
53469-21-9	Aroclor 1242	ND	0.27	ug/l
12672-29-6	Aroclor 1248	ND	0.27	ug/l
11097-69-1	Aroclor 1254	ND	0.27	ug/l
11096-82-5	Aroclor 1260	ND	0.27	ug/l
37324-23-5	Aroclor 1262	ND	0.27	ug/l
11100-14-4	Aroclor 1268	ND	0.27	ug/l
CAS No.	Surrogate Recoveries	Run# 1	<b>Run# 2</b>	<b>Limits</b>
877-09-8	Tetrachloro-m-xylene	124%		30-150%
877-09-8	Tetrachloro-m-xylene	118%		30-150%
2051-24-3	Decachlorobiphenyl	115%		30-150%
2051-24-3	Decachlorobiphenyl	108%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1123438UF

Lab Sample ID:M83394-17Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	11.4	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	304	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	48.4	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Client Sample ID: 1123439

 Lab Sample ID:
 M83394-18
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P37657.D	1	06/12/09	AMY	n/a	n/a	MSP1247
Run #2	P37712.D	10	06/17/09	AMY	n/a	n/a	MSP1249

	Purge Volume	
Run #1	5.0 ml	
Run #2	5.0 ml	

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q	)
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	0.50	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.4	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	5.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	51.8	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	63.2	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1123439

 Lab Sample ID:
 M83394-18
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	40.9	1.0	ug/l	
109-99-9	Tetrahydrofuran	24.3	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	4.4	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	322 a	10	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	19.1	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	ts
1868-53-7	Dibromofluoromethane	121%	108%	70-13	0%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



c

Page 3 of 3

Client Sample ID: 1123439

Lab Sample ID: M83394-18 **Date Sampled:** 06/05/09 Matrix: **Date Received:** 06/05/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

### **VOA RCP List**

CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	106%	102%	70-130%
460-00-4	4-Bromofluorobenzene	102%	102%	70-130%

(a) Result is from Run# 2

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1123439

 Lab Sample ID:
 M83394-18
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC28002.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Initial Volume Final Volume
Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.286 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 53% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



L

Page 1 of 1

Client Sample ID: 1123439

 Lab Sample ID:
 M83394-18
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BB26270.D 1 06/18/09 CZ 06/12/09 OP18727 GBB1076

Run #2

Initial Volume Final Volume

Run #1 950 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
877-09-8	Tetrachloro-m-xylene	129%		30-150	%
877-09-8	Tetrachloro-m-xylene	123%		30-150	%
2051-24-3	Decachlorobiphenyl	123%		30-150	%
2051-24-3	Decachlorobiphenyl	113%		30-150	%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1123439UF

Lab Sample ID:M83394-19Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	10.5	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	300	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	46.8	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622

Page 1 of 3

Client Sample ID: 1123440

 Lab Sample ID:
 M83394-20
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P37644.D 1 06/12/09 AMY n/a n/a MSP1247

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	6.4	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1123440

 Lab Sample ID:
 M83394-20
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 130% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1123440

 Lab Sample ID:
 M83394-20
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	105%		70-130%
460-00-4	4-Bromofluorobenzene	103%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1123440

 Lab Sample ID:
 M83394-20
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC28003.D 1 06/18/09 WZ 06/09/09 OP18694 GBC1516

Run #2

Initial Volume Final Volume
Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 55% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# **Report of Analysis**

Page 1 of 1

Client Sample ID: 1123440

 Lab Sample ID:
 M83394-20
 Date Sampled:
 06/05/09

 Matrix:
 AQ - Ground Water
 Date Received:
 06/05/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BB26271.D 1 06/18/09 CZ 06/12/09 OP18727 GBB1076

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	110%		30-150%
877-09-8	Tetrachloro-m-xylene	105%		30-150%
2051-24-3	Decachlorobiphenyl	113%		30-150%
2051-24-3	Decachlorobiphenyl	107%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



L

# Report of Analysis

Page 1 of 1

Client Sample ID: 1123440UF

Lab Sample ID:M83394-21Date Sampled:06/05/09Matrix:AQ - Ground WaterDate Received:06/05/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	< 200	200	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	06/09/09	06/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	06/10/09	06/11/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA10560(2) Instrument QC Batch: MA10567(3) Prep QC Batch: MP13617(4) Prep QC Batch: MP13622



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



# **Parameter Certification Exceptions**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



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M83394: Chain of Custody Page 1 of 2



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-15		4109				14:40	AD	П	1	П	1		1				X								
/6	11234					10:25	44	П	6	2	$\Box$	4	6	X	X	×									
ーフ		38 UF				10:25	RA	П	1	П	1		1				X								
-18	11234					10:25	RD	П	6	2	П	4	6	X	X	У			Ī						
-19	1123 +	139 UF		$\Box$		10:25	RD		Î		l		1				X								
-20	11234	140		1		13:00	RD	W	6	2		4	6	X	У	X									
-21	1123	440 UF		45	09	13:00	RP	Gu	1		1		1				X								
				₹.	τ -			Ī																	
	DATA TURNAROUN	D INFORMATION				DATA DEL	IVERABL	E INF	ORM/	TION	7	98			400		- I		COMM	ENTS	REM	IARKS			
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M83394: Chain of Custody Page 2 of 2



### **Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form**

**Laboratory Name: Accutest New England** Client: Loureiro Eng. Associates

**Project Location:** UTC: 2009 Quarterly GW-Willow Pond **Project Number:** 88UT907

Sampling Date(s): 6/5/2009

Laboratory Sample ID(s):  $M83394\text{-}1,\,M83394\text{-}2,\,M83394\text{-}3,\,M83394\text{-}4,\,M83394\text{-}5,\,M83394\text{-}6,\,M83394\text{-}7,\,M83394\text{-}8,$ 

M83394-9, M83394-10, M83394-11, M83394-12, M83394-13, M83394-14, M83394-15,

M83394-16, M83394-17, M83394-18, M83394-19, M83394-20, M83394-21

Methods: CT-ETPH 7/06, SW846 6010B, 7470A, 8082, 8260B

	01 211 11 1700, 0110 10 00 10B, 1 11 011, 0002, 0200B		
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes 🔽	No 🗖
1A	Where all the method specified preservation and holding time requirements met?	Yes 🗹	No 🗖
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes 🗖	No [
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes 🔽	No 🗖
3	Were samples received at an appropriate temperature (<6° C)?	Yes 🗹	No 🗆
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes $\square$	No 🗹
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🔽	No 🗖
	b) Were these reporting limits met?	Yes 🗖	No 🔽
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🗖	No 🔽
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes 🔽	No <u></u>

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belie
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

Signature: Position: Lab Director Date: 6/19/2009 Printed Name: Reza Tand

Accutest New England



# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

M83394 Job No: UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M83394-1 1123427	Collected: 05-JUN-09 1	0:45 By: NE	Receiv	ed: 05-JUN-	09 By:	SAP
M83394-1 M83394-1 M83394-1	SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 11:42 18-JUN-09 14:16 18-JUN-09 16:43	AMY CZ WZ	12-JUN-09 09-JUN-09		V8260RCP P8082RCP BCTTPH
M83394-2 1123427UF	Collected: 05-JUN-09 1	0:45 By: NE	Receiv	ed: 05-JUN-	09 By:	SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:21 11-JUN-09 11:31		09-JUN-09 10-JUN-09		HG AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M83394-3 1123436	Collected: 05-JUN-09 1	2:15 By: NE	Receiv	ed: 05-JUN-	09 By:	SAP
M83394-3	SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 12:10 18-JUN-09 14:55 18-JUN-09 17:22	CZ	12-JUN-09 09-JUN-09		V8260RCP P8082RCP BCTTPH
M83394-4 1123436UF	Collected: 05-JUN-09 1	2:15 By: NE	Receiv	ed: 05-JUN-	09 By:	SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:23 11-JUN-09 11:48		09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83394-5 1123437	Collected: 05-JUN-09 1	4:20 By: NE	Receiv	ed: 05-JUN-	09 By:	SAP
M83394-5 M83394-5	SW846 8260B SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 20:06 17-JUN-09 16:16 18-JUN-09 15:34 18-JUN-09 18:02	CZ	12-JUN-09 09-JUN-09		V8260RCP V8260RCP P8082RCP BCTTPH
M83394-6 1123437UF	Collected: 05-JUN-09 1	4:20 By: NE	Receiv	ed: 05-JUN-	09 By:	SAP
M83394-6	SW846 7470A	10-JUN-09 11:25	MA	09-JUN-09	MA	HG



M83394

Job No:

# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M83394-6	SW846 6010B	11-JUN-09 11:54	PY	10-JUN-09	PY	AG,AS,BA,CD,CR,CU,NI,PB,SI ZN
M83394-7 1123434	Collected: 05-JUN-09	11:05 By: SK	Receiv	ved: 05-JUN-	-09 By	: SAP
M83394-7	SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 12:38 18-JUN-09 17:45 18-JUN-09 18:42	CZ	12-JUN-09 09-JUN-09		V8260RCP P8082RCP BCTTPH
M83394-8 1123434UF	Collected: 05-JUN-09	11:05 By: SK	Receiv	ved: 05-JUN-	-09 By	: SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:27 11-JUN-09 11:59	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SI ZN
M83394-9 1123435	Collected: 05-JUN-09	13:10 By: SK	Receiv	ved: 05-JUN-	-09 By	: SAP
M83394-9	SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 13:06 18-JUN-09 18:24 18-JUN-09 19:22		12-JUN-09 09-JUN-09		V8260RCP P8082RCP BCTTPH
M83394-10 1123435UF	Collected: 05-JUN-09	13:10 By: SK	Receiv	ved: 05-JUN-	-09 By	: SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:30 11-JUN-09 12:05	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SI ZN
M83394-11 1123443	Collected: 05-JUN-09	08:30 By: NE	Receiv	ved: 05-JUN-	-09 By	: SAP
M83394-11	SW846 8260B	12-JUN-09 13:34	AMY			V8260RCP
M83394-12 1123444	Collected: 05-JUN-09	14:30 By: NE	Receiv	ved: 05-JUN-	-09 By	: SAP
M83394-12	SW846 8260B	12-JUN-09 14:02	AMY			V8260RCP



# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

M83394 Job No: UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
	SW846 8082 CT-ETPH 7/06	18-JUN-09 19:02 18-JUN-09 20:41	CZ WZ	12-JUN-09 09-JUN-09		P8082RCP BCTTPH
M83394-13 1123444UF	Collected: 05-JUN-09	14:30 By: NE	Receiv	ved: 05-JUN-	-09 By:	: SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:32 11-JUN-09 12:11	MA PY	09-JUN-09 10-JUN-09		HG AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M83394-14 1123441	Collected: 05-JUN-09	14:40 By: RD	Receiv	ved: 05-JUN-	-09 By:	: SAP
M83394-14	SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 14:30 18-JUN-09 19:41 18-JUN-09 21:21	AMY CZ WZ	12-JUN-09 09-JUN-09		V8260RCP P8082RCP BCTTPH
M83394-15 1123441UF	Collected: 05-JUN-09	14:40 By: RD	Receiv	ved: 05-JUN-	-09 By:	: SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:39 11-JUN-09 12:16	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83394-16 1123438	Collected: 05-JUN-09	10:25 By: RD	Receiv	ved: 05-JUN-	-09 By:	: SAP
M83394-16 M83394-16	SW846 8260B SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 20:34 17-JUN-09 16:44 18-JUN-09 20:20 18-JUN-09 22:00	AMY AMY CZ WZ	12-JUN-09 09-JUN-09		V8260RCP V8260RCP P8082RCP BCTTPH
M83394-17 1123438UF	Collected: 05-JUN-09	10:25 By: RD	Receiv	ved: 05-JUN-	-09 By:	: SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:41 11-JUN-09 12:22	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN



# **Internal Sample Tracking Chronicle**

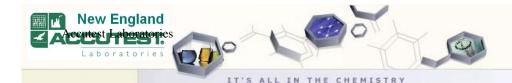
Loureiro Eng. Associates

**Job No:** M83394

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M83394-18 1123439	Collected: 05-JUN-09	10:25 By: RD	Receiv	ved: 05-JUN-	-09 By:	SAP
M83394-18 M83394-18	SW846 8260B SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 21:03 17-JUN-09 17:13 18-JUN-09 20:59 18-JUN-09 22:40	AMY CZ	12-JUN-09 09-JUN-09		V8260RCP V8260RCP P8082RCP BCTTPH
M83394-19 1123439UF	Collected: 05-JUN-09	10:25 By: RD	Receiv	ved: 05-JUN-	-09 By:	SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:43 11-JUN-09 12:28		09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M83394-20 1123440	Collected: 05-JUN-09	13:00 By: RD	Receiv	ved: 05-JUN-	09 By:	SAP
M83394-20	SW846 8260B SW846 8082 CT-ETPH 7/06	12-JUN-09 14:58 18-JUN-09 21:38 18-JUN-09 23:19	CZ	12-JUN-09 09-JUN-09		V8260RCP P8082RCP BCTTPH
M83394-21 1123440UF	Collected: 05-JUN-09	13:00 By: RD	Receiv	ved: 05-JUN-	09 By:	SAP
	SW846 7470A SW846 6010B	10-JUN-09 11:45 11-JUN-09 12:33	MA PY	09-JUN-09 10-JUN-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN





# GC/MS Volatiles

# QC Data Summaries

# Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



# **Method Blank Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch
MSP1247-MB	P37636.D	1	06/12/09	AMY	n/a	n/a	MSP1247

#### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



# **Method Blank Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	Analytical Batch
MSP1247-MB	P37636.D	1	06/12/09	AMY	n/a	n/a	MSP1247

### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



**Method Blank Summary** Job Number: M83394

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample MSP1247-MB	<b>File ID</b> P37636.D	<b>DF</b> 1	<b>Analyzed</b> 06/12/09	<b>By</b> AMY	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch MSP1247

### The QC reported here applies to the following samples:

CAS No.	<b>Surrogate Recoveries</b>		Limits
	Dibromofluoromethane	121%	70-130%
	Toluene-D8 4-Bromofluorobenzene	102% 104%	70-130% 70-130%



# **Method Blank Summary**

Job Number: M83394

**Account:** LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	Analytical Batch
MSP1249-MB	P37705.D	1	06/17/09	AMY	n/a	n/a	MSP1249

### The QC reported here applies to the following samples:

M83394-5, M83394-16, M83394-18

CAS No.	Compound	Result	RL	Units Q		
127-18-4 79-01-6	Tetrachloroethene Trichloroethene	ND ND	1.0 1.0	ug/l ug/l		
CAS No.	Surrogate Recoveries	Limits				
1868-53-7 2037-26-5	Dibromofluoromethane Toluene-D8	103% 100%	70-1309 70-1309			



**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP1247-BS	P37633.D	1	06/12/09	AMY	n/a	n/a	MSP1247
MSP1247-BSD	P37634.D	1	06/12/09	AMY	n/a	n/a	MSP1247

#### The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	70.1	140* a	68.9	138* a	2	70-130/25
107-13-1	Acrylonitrile	250	316	126	320	128	1	70-130/25
71-43-2	Benzene	50	47.6	95	46.0	92	3	70-130/25
108-86-1	Bromobenzene	50	47.4	95	44.6	89	6	70-130/25
75-27-4	Bromodichloromethane	50	55.4	111	53.8	108	3	70-130/25
75-25-2	Bromoform	50	48.4	97	45.8	92	6	70-130/25
74-83-9	Bromomethane	50	51.8	104	51.8	104	0	70-130/25
78-93-3	2-Butanone (MEK)	50	58.3	117	56.3	113	3	70-130/25
104-51-8	n-Butylbenzene	50	49.5	99	41.5	83	18	70-130/25
135-98-8	sec-Butylbenzene	50	53.2	106	46.5	93	13	70-130/25
98-06-6	tert-Butylbenzene	50	52.6	105	46.7	93	12	70-130/25
75-15-0	Carbon disulfide	50	53.7	107	48.3	97	11	70-130/25
56-23-5	Carbon tetrachloride	50	51.3	103	46.8	94	9	70-130/25
108-90-7	Chlorobenzene	50	45.1	90	44.7	89	1	70-130/25
75-00-3	Chloroethane	50	56.6	113	55.1	110	3	70-130/25
67-66-3	Chloroform	50	53.2	106	53.1	106	0	70-130/25
74-87-3	Chloromethane	50	60.9	122	57.9	116	5	70-130/25
95-49-8	o-Chlorotoluene	50	51.3	103	48.3	97	6	70-130/25
106-43-4	p-Chlorotoluene	50	51.7	103	48.7	97	6	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	53.2	106	49.2	98	8	70-130/25
124-48-1	Dibromochloromethane	50	52.7	105	52.1	104	1	70-130/25
106-93-4	1,2-Dibromoethane	50	49.3	99	47.6	95	4	70-130/25
95-50-1	1,2-Dichlorobenzene	50	49.3	99	46.7	93	5	70-130/25
541-73-1	1,3-Dichlorobenzene	50	49.9	100	47.1	94	6	70-130/25
106-46-7	1,4-Dichlorobenzene	50	49.5	99	47.2	94	5	70-130/25
75-71-8	Dichlorodifluoromethane	50	47.0	94	45.2	90	4	70-130/25
75-34-3	1,1-Dichloroethane	50	51.5	103	52.3	105	2	70-130/25
107-06-2	1,2-Dichloroethane	50	51.2	102	50.3	101	2	70-130/25
75-35-4	1,1-Dichloroethene	50	51.0	102	47.1	94	8	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	52.7	105	52.7	105	0	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	51.2	102	50.4	101	2	70-130/25
78-87-5	1,2-Dichloropropane	50	51.3	103	49.4	99	4	70-130/25
142-28-9	1,3-Dichloropropane	50	48.7	97	48.1	96	1	70-130/25
594-20-7	2,2-Dichloropropane	50	23.5	47* a	46.2	92	65* a	70-130/25
563-58-6	1,1-Dichloropropene	50	51.7	103	47.2	94	9	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	43.5	87	44.3	89	2	70-130/25



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**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSP1247-BS	P37633.D	1	06/12/09	AMY	n/a	n/a	MSP1247
MSP1247-BSD	P37634.D	1	06/12/09	AMY	n/a	n/a	MSP1247

#### The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	43.0	86	43.7	87	2	70-130/25
100-41-4	Ethylbenzene Ethylbenzene	50	46.8	94	45.1	90	4	70-130/25
76-13-1	Freon 113	50	51.6	103	49.4	99	4	70-130/25
87-68-3	Hexachlorobutadiene	50	54.8	110	43.9	88	22	70-130/25
591-78-6	2-Hexanone	50	53.5	107	49.3	99	8	70-130/25
98-82-8	Isopropylbenzene	50	51.4	103	47.7	95	7	70-130/25
99-87-6	p-Isopropyltoluene	50	53.4	107	46.7	93	13	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	48.0	96	54.9	110	13	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)		57.3	115	53.1	106	8	70-130/25
74-95-3	Methylene bromide	50	54.5	109	53.4	107	2	70-130/25
75-09-2	Methylene chloride	50	50.1	100	51.5	103	3	70-130/25
91-20-3	Naphthalene	50	45.4	91	39.9	80	13	70-130/25
103-65-1	n-Propylbenzene	50	53.1	106	47.8	96	11	70-130/25
100-42-5	Styrene	50	43.6	87	43.0	86	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	48.4	97	46.3	93	4	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	50.9	102	48.6	97	5	70-130/25
127-18-4	Tetrachloroethene	50	46.3	93	43.9	88	5	70-130/25
109-99-9	Tetrahydrofuran	50	65.3	131* a	66.2	132* a	1	70-130/25
108-88-3	Toluene	50	50.5	101	48.4	97	4	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	49.6	99	48.8	98	2	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	46.7	93	41.1	82	13	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	46.4	93	40.3	81	14	70-130/25
71-55-6	1,1,1-Trichloroethane	50	50.4	101	52.0	104	3	70-130/25
79-00-5	1,1,2-Trichloroethane	50	51.9	104	50.9	102	2	70-130/25
79-01-6	Trichloroethene	50	52.7	105	48.5	97	8	70-130/25
75-69-4	Trichlorofluoromethane	50	48.0	96	46.2	92	4	70-130/25
96-18-4	1,2,3-Trichloropropane	50	50.4	101	47.1	94	7	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	50.2	100	45.8	92	9	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	51.3	103	46.9	94	9	70-130/25
75-01-4	Vinyl chloride	50	58.5	117	56.3	113	4	70-130/25
	m,p-Xylene	100	93.6	94	90.6	91	3	70-130/25
95-47-6	o-Xylene	50	46.9	94	45.3	91	3	70-130/25



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**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample MSP1247-BS	File ID P37633.D	<b>DF</b>	<b>Analyzed</b> 06/12/09	By AMY	Prep Date	Prep Batch	Analytical Batch MSP1247
MSP1247-BSD	P37634.D	1	06/12/09	AMY	n/a	n/a	MSP1247

#### The QC reported here applies to the following samples:

M83394-1, M83394-3, M83394-5, M83394-7, M83394-9, M83394-11, M83394-12, M83394-14, M83394-16, M83394-18, M83394-20

CAS No.	<b>Surrogate Recoveries</b>	BSP	BSD	Limits
	Dibromofluoromethane	103%	107%	70-130%
2037-26-5 460-00-4	Toluene-D8 4-Bromofluorobenzene	103% 104%	101% 103%	70-130% 70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSP1249-BS	P37702.D	1	06/17/09	AMY	n/a	n/a	MSP1249
MSP1249-BSD	P37703.D	1	06/17/09	AMY	n/a	n/a	MSP1249

### The QC reported here applies to the following samples:

M83394-5, M83394-16, M83394-18

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
127-18-4 79-01-6	Tetrachloroethene Trichloroethene	50 50	49.6 49.5	99 99	47.0 48.7	94 97	5 2	70-130/25 70-130/25
CACNO	Cuma anta Donovarias	DCD	DC	D.	T ::4a			

CAS No.	<b>Surrogate Recoveries</b>	BSP	BSD	Limits
	Dibromofluoromethane Toluene-D8	105% 101%	103% 100%	70-130% 70-130%
460-00-4	4-Bromofluorobenzene	98%	97%	70-130%



**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83394-14MS	P37647.D	5	06/12/09	AMY	n/a	n/a	MSP1247
M83394-14MSD	P37648.D	5	06/12/09	AMY	n/a	n/a	MSP1247
M83394-14	P37643.D	1	06/12/09	AMY	n/a	n/a	MSP1247

### The QC reported here applies to the following samples:

CAS No.	Compound	M83394-14 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	276	110	287	115	4	70-130/30
107-13-1	Acrylonitrile	ND	1250	1790	143* a	1760	141* a	2	70-130/30
71-43-2	Benzene	ND	250	250	100	234	94	7	70-130/30
108-86-1	Bromobenzene	ND	250	218	87	216	86	1	70-130/30
75-27-4	Bromodichloromethane	ND	250	278	111	272	109	2	70-130/30
75-25-2	Bromoform	ND	250	234	94	232	93	1	70-130/30
74-83-9	Bromomethane	ND	250	237	95	251	100	6	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	287	115	277	111	4	70-130/30
104-51-8	n-Butylbenzene	ND	250	201	80	199	80	1	70-130/30
135-98-8	sec-Butylbenzene	ND	250	230	92	222	89	4	70-130/30
98-06-6	tert-Butylbenzene	ND	250	228	91	219	88	4	70-130/30
75-15-0	Carbon disulfide	ND	250	268	107	261	104	3	70-130/30
56-23-5	Carbon tetrachloride	ND	250	262	105	244	98	7	70-130/30
108-90-7	Chlorobenzene	ND	250	221	88	221	88	0	70-130/30
75-00-3	Chloroethane	ND	250	321	128	314	126	2	70-130/30
67-66-3	Chloroform	ND	250	300	120	287	115	4	70-130/30
74-87-3	Chloromethane	ND	250	355	142* a	376	150* a	6	70-130/30
95-49-8	o-Chlorotoluene	ND	250	238	95	232	93	3	70-130/30
106-43-4	p-Chlorotoluene	ND	250	240	96	235	94	2	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	239	96	253	101	6	70-130/30
124-48-1	Dibromochloromethane	ND	250	258	103	262	105	2	70-130/30
106-93-4	1,2-Dibromoethane	ND	250	241	96	244	98	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	224	90	226	90	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	230	92	226	90	2	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	231	92	227	91	2	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	281	112	259	104	8	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	292	117	278	111	5	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	277	111	261	104	6	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	264	106	255	102	3	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	291	116	284	114	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	264	106	257	103	3	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	269	108	250	100	7	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	247	99	250	100	1	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	260	104	256	102	2	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	249	100	237	95	5	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND	250	227	91	223	89	2	70-130/30



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**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Bv	Prep Date	Prep Batch	Analytical Batch
M83394-14MS	P37647.D	5	06/12/09	AMY	n/a	n/a	MSP1247
M83394-14MSD	P37648.D	5	06/12/09	AMY	n/a	n/a	MSP1247
M83394-14	P37643.D	1	06/12/09	AMY	n/a	n/a	MSP1247

### The QC reported here applies to the following samples:

CAS No.	Compound	M83394-14 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061 02 6	trans-1,3-Dichloropropene	ND	250	219	88	217	87	1	70-130/30
10001-02-0	Ethylbenzene	ND	250	230	92	227	91	1	70-130/30
76-13-1	Freon 113	ND	250	295	118	270	108	9	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	208	83	204	82	2	70-130/30
591-78-6	2-Hexanone	ND	250	217	87	243	97	11	70-130/30
98-82-8	Isopropylbenzene	ND	250	232	93	223	89	4	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	233	93	229	92	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	294	118	295	118	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)		250	278	111	289	116	4	70-130/30
74-95-3	Methylene bromide	ND	250	281	112	274	110	3	70-130/30
75-09-2	Methylene chloride	ND	250	294	118	276	110	6	70-130/30
91-20-3	Naphthalene	ND	250	165	66* a	181	72	9	70-130/30
103-65-1	n-Propylbenzene	ND	250	234	94	229	92	2	70-130/30
100-42-5	Styrene	ND	250	209	84	211	84	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	238	95	237	95	0	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	249	100	243	97	2	70-130/30
127-18-4	Tetrachloroethene	ND	250	226	90	221	88	2	70-130/30
109-99-9	Tetrahydrofuran	ND	250	367	147* b	363	145* b	1	70-130/30
108-88-3	Toluene	ND	250	250	100	239	96	4	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	250	247	99	256	102	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	183	73	194	78	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	182	73	189	76	4	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	295	118	276	110	7	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	273	109	257	103	6	70-130/30
79-01-6	Trichloroethene	ND	250	259	104	243	97	6	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	273	109	252	101	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	240	96	233	93	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	229	92	223	89	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	228	91	222	89	3	70-130/30
75-01-4	Vinyl chloride	ND	250	342	137* a	344	138* a	1	70-130/30
	m,p-Xylene	ND	500	461	92	450	90	2	70-130/30
95-47-6	o-Xylene	ND	250	236	94	231	92	2	70-130/30



# 5.3.1

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**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83394-14MS	P37647.D	5	06/12/09	AMY	n/a	n/a	MSP1247
M83394-14MSD	P37648.D	5	06/12/09	AMY	n/a	n/a	MSP1247
M83394-14	P37643.D	1	06/12/09	AMY	n/a	n/a	MSP1247

#### The QC reported here applies to the following samples:

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M83394-14	Limits
1868-53-7 2037-26-5	Dibromofluoromethane Toluene-D8	117% 101%	117% 101%	130% 106%	70-130% 70-130%
460-00-4	4-Bromofluorobenzene	99%	101%	105%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Blank Spike meets program technical requirements.



**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83394

**Account:** LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M83437-16MS	P37722.D	5	06/17/09	AMY	n/a	n/a	MSP1249
M83437-16MSD	P37723.D	5	06/17/09	AMY	n/a	n/a	MSP1249
M83437-16	P37709.D	1	06/17/09	AMY	n/a	n/a	MSP1249

The QC reported here applies to the following samples:

M83394-5, M83394-16, M83394-18

CAS No.	Compound	M83437-16 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
127-18-4 79-01-6	Tetrachloroethene Trichloroethene	ND ND	250 250	258 258	103 103	231 237	92 95	11 8	70-130/30 70-130/30
CAS No.	Surrogate Recoveries	MS	MSD	M8	3437-16	Limits			
1868-53-7 2037-26-5 460-00-4	Dibromofluoromethane Toluene-D8 4-Bromofluorobenzene	107% 102% 97%	108% 100% 98%	104 100 109	%	70-130% 70-130% 70-130%	)		



## Volatile Internal Standard Area Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

**Injection Date:** 06/12/09 Check Std: MSP1247-CC1243 Lab File ID: P37632.D **Injection Time:** 09:21

**Instrument ID:** GCMSP Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	45944 91888 22972	8.89 9.39 8.39	89879 179758 44940	9.76 10.26 9.26	61851 123702 30926	13.51	56851 113702 28426	16.07	35426 70852 17713	6.48 6.98 5.98
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP1247-BS MSP1247-BSD MSP1247-MB M83394-1 M83394-7 M83394-9 M83394-11 M83394-12 M83394-14 M83394-20 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	48212 46523 36793 37134 36723 34623 33071 32187 31208 31021 30255 26212 30512 37912 40571 38076 35337 34530 31933 32562 31339	8.89 8.89 8.90 8.90 8.90 8.90 8.90 8.89 8.89	91468 91814 72203 69865 68924 67250 64211 63976 61521 60102 59641 56092 66142 77639 83262 71272 68750 66555 65212 63198 60160	9.76 9.76 9.76 9.76 9.76 9.76 9.77 9.77	63869 62303 49289 49522 47136 46306 44579 44478 43202 43222 42047 34589 46061 54595 56369 53295 47242 46664 46568 44372 43507	13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01	54376 54288 36087 34370 33729 32513 32574 29685 28854 29087 29846 24599° 39587 49216 51735 38410 34350 32699 32078 30687 29725	15.57 15.58 15.57 15.57 15.58 15.57 15.58 15.58 15.57 15.57 15.57 15.57 15.57 15.57 15.57	35579 33156 33708 32165 33333 34333 31007 30060 27600 27367 29566 26262 30538 32618 34341 35185 34700 31353 28490 30311 30303	6.49 6.49 6.51 6.51 6.51 6.52 6.51 6.51 6.51 6.51 6.51 6.51 6.51 6.50 6.49 6.47 6.51 6.50 6.49 6.50 6.50
ZZZZZZ M83394-5 M83394-16 M83394-18	31339 33133 33325 33052	8.90 8.89 8.89 8.89	60160 62872 60616 59163	9.76 9.76 9.76 9.76	43507 46353 43736 43149	13.01 13.01	29725 29847 28615 28818	15.57 15.58	30303 28439 30145 29439	6.50 6.50 6.51 6.51

IS 1 = Pentafluorobenzene IS 2 = 1,4-Difluorobenzene = Chlorobenzene-D5 IS 3 IS 4 = 1,4-Dichlorobenzene-d4 IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.
- (c) Outside control limits due to possible matrix interference. Confirmed by reanalysis.



# Volatile Internal Standard Area Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Check Std:MSP1249-CC1248Injection Date:06/17/09Lab File ID:P37702.DInjection Time:10:33

**Instrument ID:** GCMSP **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	50366 100732 25183	8.89 9.39 8.39	81963 163926 40982	9.76 10.26 9.26	42260 84520 21130	13.01 13.51 12.51	32957 65914 16479	15.57 16.07 15.07	21293 42586 10647	6.50 7.00 6.00
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSP1249-BS MSP1249-BSD MSP1249-MB ZZZZZZ ZZZZZZ ZZZZZZ M83437-16 M83394-5 M83394-16 M83394-18 ZZZZZZ ZZZZZZ	50366 50855 47673 50608 45126 47949 47352 39437 43561 45879 42948 43689 44027	8.89 8.89 8.89 8.89 8.89 8.90 8.90 8.90	81963 81687 76441 82768 73331 75409 76630 66676 71559 74620 71705 71730 73537	9.76 9.76 9.76 9.76 9.77 9.76 9.77 9.76 9.76	42260 41540 38150 40012 35905 36639 37042 32883 36173 36397 34690 35459 36889	13.01 13.01 13.02 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01 13.01	27742 25031 25837 25369 22777 24649 25702 23978 23673	15.58 15.58 15.58 15.58 15.58	21293 20336 18689 20043 17595 18500 17572 17562 21184 21901 17989 17916 18682	6.50 6.50 6.51 6.53 6.53 6.52 6.52 6.52 6.52 6.52 6.52 6.53 6.53 6.53
ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZ	43760 43669 43661 48413 46332 43569 47256 47455	8.90 8.89 8.89 8.89 8.90 8.90 8.89	71106 72225 70163 77730 75746 69491 77525 79026	9.77 9.76 9.76 9.76 9.76 9.76 9.76 9.76	34838 36083 36916 38355 36968 34264 39548 40054	13.01 13.01 13.01 13.01 13.01 13.01 13.01	23085 24389	15.58 15.57 15.57 15.58 15.58 15.58	16619 18174 17854 20194 13928 14944 15360 17077	6.52 6.53 6.52 6.52 6.53 6.52 6.53 6.52 6.50 6.51

IS 1 = Pentafluorobenzene IS 2 = 1,4-Difluorobenzene IS 3 = Chlorobenzene-D5 IS 4 = 1,4-Dichlorobenzene-d4 IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



# **Volatile Surrogate Recovery Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8260B Matrix: AQ

### Samples and QC shown here apply to the above method

Lab	Lab			
Sample ID	File ID	S1	<b>S2</b>	S3
M83394-1	P37637.D	119.0	105.0	105.0
M83394-3	P37638.D	119.0	102.0	106.0
M83394-5	P37710.D	108.0	99.0	107.0
M83394-5	P37655.D	123.0	104.0	107.0
M83394-7	P37639.D	121.0	103.0	102.0
M83394-9	P37640.D	125.0	104.0	106.0
M83394-11	P37641.D	123.0	103.0	105.0
M83394-12	P37642.D	127.0	104.0	107.0
M83394-14	P37643.D	130.0	106.0	105.0
M83394-16	P37711.D	110.0	102.0	109.0
M83394-16	P37656.D	118.0	106.0	106.0
M83394-18	P37712.D	108.0	102.0	102.0
M83394-18	P37657.D	121.0	106.0	102.0
M83394-20	P37644.D	130.0	105.0	103.0
M83394-14MS	P37647.D	117.0	101.0	99.0
M83394-14MSD	P37648.D	117.0	101.0	101.0
M83437-16MS	P37722.D	107.0	102.0	97.0
M83437-16MSD	P37723.D	108.0	100.0	98.0
MSP1247-BS	P37633.D	103.0	103.0	104.0
MSP1247-BSD	P37634.D	107.0	101.0	103.0
MSP1247-MB	P37636.D	121.0	102.0	104.0
MSP1249-BS	P37702.D	105.0	101.0	98.0
MSP1249-BSD	P37703.D	103.0	100.0	97.0
MSP1249-MB	P37705.D	103.0	100.0	109.0

Surrogate Recovery Compounds Limits

 S1 = Dibromofluoromethane
 70-130%

 S2 = Toluene-D8
 70-130%

 S3 = 4-Bromofluorobenzene
 70-130%





# GC Semi-volatiles

# QC Data Summaries

# Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



**o** 

# Method Blank Summary Page 1 of 1

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP18694-MB	File ID BC27988.D	<b>DF</b> 1	<b>Analyzed</b> 06/18/09	By WZ	<b>Prep Date</b> 06/09/09	Prep Batch OP18694	Analytical Batch GBC1516

The QC reported here applies to the following samples:

Method: CT-ETPH 7/06

M83394-1, M83394-3, M83394-5, M83394-7, M83394-9, M83394-12, M83394-14, M83394-16, M83394-18, M83394-20

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 65% 50-149%



**Method:** SW846 8082

# **Method Blank Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample OP18727-MB	File ID BB26255.D	<b>DF</b> 1	<b>Analyzed</b> 06/18/09	By CZ	<b>Prep Date</b> 06/12/09	Prep Batch OP18727	Analytical Batch GBB1076

### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	103%	30-150%
877-09-8	Tetrachloro-m-xylene	94%	30-150%
2051-24-3	Decachlorobiphenyl	64%	30-150%
2051-24-3	Decachlorobiphenyl	55%	30-150%



**Method:** CT-ETPH 7/06

# **Blank Spike Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP18694-BS	File ID BC27989.D	<b>DF</b> 1	<b>Analyzed</b> 06/18/09	By WZ	<b>Prep Date</b> 06/09/09	Prep Batch OP18694	Analytical Batch GBC1516

The QC reported here applies to the following samples:

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.609	87	60-120

CAS No.	Surrogate Recoveries	BSP	Limits
3386-33-2	1-Chlorooctadecane	69%	50-149%



**Method:** SW846 8082

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP18727-BS	File ID BB26256.D	<b>DF</b>	<b>Analyzed</b> 06/18/09	By CZ	<b>Prep Date</b> 06/12/09	Prep Batch OP18727	Analytical Batch GBB1076
OP18727-BSD	BB26257.D	1	06/18/09	CZ	06/12/09	OP18727	GBB1076

The QC reported here applies to the following samples:

CAS No. Com	npound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
12674-11-2 Aroc	clor 1016	2	2.4	120	2.4	120	0	40-140/20
11104-28-2 Aroc	clor 1221		ND		ND		nc	40-140/20
11141-16-5 Aroc	clor 1232		ND		ND		nc	40-140/20
53469-21-9 Aroc	clor 1242		ND		ND		nc	40-140/20
12672-29-6 Aroc	clor 1248		ND		ND		nc	40-140/20
11097-69-1 Aroc	clor 1254		ND		ND		nc	40-140/20
11096-82-5 Aroc	clor 1260	2	2.4	120	2.4	120	0	40-140/20
37324-23-5 Aroc	clor 1262		ND		ND		nc	40-140/20
11100-14-4 Aroc	clor 1268		ND		ND		nc	40-140/20

CAS No.	<b>Surrogate Recoveries</b>	BSP	BSD	Limits
877-09-8	Tetrachloro-m-xylene	128%	122%	30-150%
877-09-8	Tetrachloro-m-xylene	117%	113%	30-150%
2051-24-3	Decachlorobiphenyl	87%	83%	30-150%
2051-24-3	Decachlorobiphenyl	74%	71%	30-150%



**Method:** CT-ETPH 7/06

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP18694-MS	BC27990.D	1	06/18/09	WZ	06/09/09	OP18694	GBC1516
OP18694-MSD	BC27991.D	1	06/18/09	WZ	06/09/09	OP18694	GBC1516
M83410-6	BC27992.D	1	06/18/09	WZ	06/09/09	OP18694	GBC1516

The QC reported here applies to the following samples:

CAS No.	Compound	M83410-6 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.641	92	0.667	95	4	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8	3410-6	Limits			
3386-33-2	1-Chlorooctadecane	57%	68%	59%	6	50-149%	ó		



**Method:** SW846 8082

#### Matrix Spike/Matrix Spike Duplicate Summary Page 1 of 1

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP18727-MS	BB26258.D	1	06/18/09	CZ	06/12/09	OP18727	GBB1076
OP18727-MSD	BB26259.D	1	06/18/09	CZ	06/12/09	OP18727	GBB1076
M83410-16	BB26260.D	1	06/18/09	CZ	06/12/09	OP18727	GBB1076

The QC reported here applies to the following samples:

CAS No.	Compound	M83410-16 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 A	Aroclor 1016	ND	2	2.4	120	2.3	115	4	40-140/50
11104-28-2 A	Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 A	Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 A	Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 A	Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 A	Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 A	Aroclor 1260	ND	2	2.4	120	2.3	115	4	40-140/50
37324-23-5 A	Aroclor 1262	ND		ND		ND		nc	40-140/50
11100-14-4 A	Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M83410-16	Limits
877-09-8	Tetrachloro-m-xylene	125%	119%	128%	30-150%
877-09-8	Tetrachloro-m-xylene	116%	109%	119%	30-150%
2051-24-3	Decachlorobiphenyl	80%	78%	85%	30-150%
2051-24-3	Decachlorobiphenyl	71%	69%	76%	30-150%



# **Semivolatile Surrogate Recovery Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH 7/06 Matrix: AQ

### Samples and QC shown here apply to the above method

Lab	Lab	
Sample ID	File ID	<b>S1</b> a
M83394-1	BC27993.D	53.0
M83394-3	BC27994.D	72.0
M83394-5	BC27995.D	61.0
M83394-7	BC27996.D	67.0
M83394-9	BC27997.D	50.0
M83394-12	BC27999.D	50.0
M83394-14	BC28000.D	62.0
M83394-16	BC28001.D	60.0
M83394-18	BC28002.D	53.0
M83394-20	BC28003.D	55.0
OP18694-BS	BC27989.D	69.0
OP18694-MB	BC27988.D	65.0
OP18694-MS	BC27990.D	57.0
OP18694-MSD	BC27991.D	68.0

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



# **Semivolatile Surrogate Recovery Summary**

Job Number: M83394

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8082 Matrix: AQ

### Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 a	<b>S1</b> b	S2 a	<b>S2</b> b
Sample 1D	riie iD	51	51	32 "	52
M83394-1	BB26261.D	117.0	108.0	92.0	84.0
M83394-3	BB26262.D	129.0	120.0	123.0	110.0
M83394-5	BB26263.D	126.0	119.0	124.0	113.0
M83394-7	BB26265.D	119.0	111.0	118.0	108.0
M83394-9	BB26266.D	131.0	124.0	130.0	120.0
M83394-12	BB26267.D	119.0	114.0	82.0	76.0
M83394-14	BB26268.D	120.0	114.0	124.0	115.0
M83394-16	BB26269.D	124.0	118.0	115.0	108.0
M83394-18	BB26270.D	129.0	123.0	123.0	113.0
M83394-20	BB26271.D	110.0	105.0	113.0	107.0
OP18727-BS	BB26256.D	128.0	117.0	87.0	74.0
OP18727-BSD	BB26257.D	122.0	113.0	83.0	71.0
OP18727-MB	BB26255.D	103.0	94.0	64.0	55.0
OP18727-MS	BB26258.D	125.0	116.0	80.0	71.0
OP18727-MSD	BB26259.D	119.0	109.0	78.0	69.0

#### Surrogate Compounds

Recovery Limits

S1 = Tetrachloro-m-xylene 30-150% S2 = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1

(b) Recovery from GC signal #2





## Metals Analysis

## QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M83394

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13617 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/09/09

Associated samples MP13617: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

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#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M83394 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13617 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

06/09/09 06/09/09 Prep Date:

Metal	M83316-6 Original		Spikelot HGRWS1		QC Limits	M83316-6 Original		RPD	QC Limits
Mercury	0.0	2.9	3	96.7	75-125	0.0	0.0	NC	0-20

Associated samples MP13617: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M83394 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13617 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 06/09/09 06/09/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.0	3	100.0	80-120	3.0	3	100.0	0.0	20

Associated samples MP13617: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

# Login Number: M83394 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units:  $\mbox{ug/l}$ 

Prep Date: 06/10/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	14	31		
Antimony	6.0	2.9	3		
Arsenic	10	2.7	3.2	-0.080	<10
Barium	200	.64	1.2	0.53	<200
Beryllium	4.0	.17	.3		
Boron	100	2.3	4.8		
Cadmium	4.0	. 24	.3	0.26	<4.0
Calcium	5000	4.7	40		
Chromium	10	.51	1.4	0.11	<10
Cobalt	50	.76	1		
Copper	25	1.1	1.8	-1.0	<25
Iron	100	11	29		
Lead	5.0	1.3	1.8	1.4	<5.0
Magnesium	5000	8	10		
Manganese	15	.17	1.3		
Molybdenum	100	. 5	1.4		
Nickel	40	.65	1	0.29	<40
Potassium	5000	25	31		
Selenium	10	1.6	3.3	-1.5	<10
Silver	5.0	.64	.7	0.40	<5.0
Sodium	5000	99	210		
Strontium	10	.12	. 3		
Thallium	10	2	4.5		
Tin	100	1.6	9.9		
Titanium	50	4.1	5.1		
Tungsten	100	5.4	7		
Vanadium	30	.65	3.5		
Zinc	20	1.1	1.3	0.24	<20

Associated samples MP13622: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

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#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M83394 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

06/10/09 06/10/09 Prep Date:

Prep Date:				06/10/09				06/10/09	
Metal	M83376-4 Original		Spikelot MPICP	% Rec	QC Limits	M83376-4 Original		RPD	QC Limits
Aluminum									
Antimony									
Arsenic	0.0	519	500	103.8	75-125	0.0	0.0	NC	0-20
Barium	266	2260	2000	99.7	75-125	266	268	0.7	0-20
Beryllium									
Boron									
Cadmium	1.2	503	500	100.4	75-125	1.2	1.5	22.2 (a)	0-20
Calcium									
Chromium	2.0	491	500	97.8	75-125	2.0	1.9	5.1	0-20
Cobalt									
Copper	20.7	553	500	106.5	75-125	20.7	20.8	0.5	0-20
Iron									
Lead	0.0	1010	1000	101.0	75-125	0.0	2.1	200.0(a)	0-20
Magnesium									
Manganese									
Molybdenum									
Nickel	89.0	584	500	99.0	75-125	89.0	89.3	0.3	0-20
Potassium									
Selenium	2.2	527	500	105.0	75-125	2.2	0.0	200.0(a)	0-20
Silver	0.0	210	200	105.0	75-125	0.0	0.0	NC	0-20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	4.2	514	500	102.0	75-125	4.2	4.3	2.4	0-20

Associated samples MP13622: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits



⁽N) Matrix Spike Rec. outside of QC limits

⁽anr) Analyte not requested

⁽a) RPD acceptable due to low duplicate and sample concentrations.

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M83394
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

06/10/09

QC Batch ID: MP13622 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

06/10/09

Prep Date:

Sodium
Strontium
Thallium
Tin
Titanium
Tungsten
Vanadium

Zinc

BSP Spikelot BSD Spikelot BSD QC OC MPICP Limits Limit Metal Result % Rec Result MPICP % Rec RPD Aluminum Antimony 507 101.4 500 Arsenic 500 80-120 512 102.4 1.0 2.0 1990 Barium 2000 99.5 80-120 1990 2000 99.5 0.0 2.0 Beryllium Boron Cadmium 494 500 98.8 80-120 504 500 100.8 2.0 20 Calcium Chromium 485 500 97.0 80-120 492 500 98.4 1.4 20 Cobalt Copper 514 500 102.8 80-120 500 103.6 0.8 20 Iron 998 1000 99.8 80-120 1010 1000 101.0 1.2 20 Lead Magnesium Manganese Molybdenum Nickel 486 500 97.2 80-120 495 500 99.0 1.8 20 Potassium Selenium 500 103.4 104.6 517 80-120 523 500 1.2 2.0 Silver 206 200 103.0 80-120 209 200 104.5 1.4 20

Associated samples MP13622: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

500

101.8

2.4

99.4 80-120 509

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

500

497

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#### SERIAL DILUTION RESULTS SUMMARY

### Login Number: M83394 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP13622 Methods: SW846 6010B

Matrix Type: AQUEOUS Units: ug/l

06/10/09 Prep Date:

Metal	M83376-4 Original	SDL 1:5	%DIF	QC Limits		
Aluminum						
Antimony						
Arsenic	0.00	0.00	NC	0-10		
Barium	266	262	1.5	0-10		
Beryllium						
Boron						
Cadmium	1.24	2.97	139.5(a)	0-10		
Calcium						
Chromium	1.95	4.03	106.7(a)	0-10		
Cobalt						
Copper	20.7	12.0	41.9 (a)	0-10		
Iron						
Lead	0.00	0.00	NC	0-10		
Magnesium						
Manganese						
Molybdenum						
Nickel	89.0	89.3	0.3	0-10		
Potassium						
Selenium	2.16	0.00	100.0(a)	0-10		
Silver	0.00	0.00	NC	0-10		
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Tungsten						
Vanadium						
Zinc	4.15	0.00	100.0(a)	0-10		

Associated samples MP13622: M83394-2, M83394-4, M83394-6, M83394-8, M83394-10, M83394-13, M83394-15, M83394-17, M83394-19, M83394-21

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).







09/22/09

09/22/09



## Technical Report for

Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring

88UT624

Accutest Job Number: M85689

Sampling Date: 09/09/09

### Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: 62





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579) NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

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Lab Director

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## **Sample Summary**

Loureiro Eng. Associates

Job No: M85689

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT624

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
M85689-1	09/09/09	11:46 HG	09/09/09	AQ	Ground Water	1130880
M85689-2	09/09/09	11:46 HG	09/09/09	AQ	Ground Water	1130880UF
M85689-3	09/09/09	13:19 HG	09/09/09	AQ	Ground Water	1130879
M85689-4	09/09/09	13:19 HG	09/09/09	AQ	Ground Water	1130879UF
M85689-5	09/09/09	13:00 HG	09/09/09	AQ	Ground Water	1130877





#### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M85689

Site: UTC:Willow Brook & Pond 2008 Monitoring Report Date 9/22/2009 12:12:38 PM

5 Sample(s) were collected on 09/09/2009 and were received at Accutest on 09/09/2009 properly preserved, at 2.3 Deg. C and intact. These Samples received an Accutest job number of M85689. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

#### Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSP1313

- All samples were analyzed within the recommended method holding time.
- Sample(s) M85683-6MS, M85683-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for Acetone, Chloromethane, Isopropylbenzene are outside control limits. Blank Spike meets program technical requirements.
- MS/MSD Recovery(s) for Bromomethane, Naphthalene are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration standard in batch MSP1310 for 2-hexanone, naphthalene is employed quadratic regression.
- Continuing calibration check standard for acetone, bromomethane, isopropylbenzene exceed 30% Difference. This check standard met RCP criteria.

### Extractables by GC By Method CT-ETPH 7/06

Matrix AQ Batch ID: OP19467

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85661-13MS, M85661-13MSD were used as the QC samples indicated.

#### Extractables by GC By Method SW846 8082

Matrix AQ Batch ID: OP19488

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M85833-10MS, M85833-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.



### Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP14086

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85689-2DUP, M85689-2MS, M85689-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Chromium are outside control limits for sample MP14086-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Only selected metals requested.

### Metals By Method SW846 7470A

Matrix AQ

Batch ID: MP14090

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85471-7ADUP, M85471-7AMS were used as the QC samples for metals.

Matrix AQ

Batch ID: MP14104

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85739-2DUP, M85739-2MS were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report (M85689).



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Carac	-1-	Resu	14~
Sam	$\mathbf{n}$	RACII	116
Dani	$\mathcal{I}$	11000	$\mathbf{I}$



Client Sample ID: 1130880

 Lab Sample ID:
 M85689-1
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P39764.D 1 09/11/09 AMY n/a n/a MSP1313

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	4.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



 Client Sample ID:
 1130880

 Lab Sample ID:
 M85689-1

 Matrix:
 AQ - Ground Water

 Method:
 SW846 8260B

 Date Sampled:
 09/09/09

 Date Received:
 09/09/09

 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	6.7	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	19.5	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	ts

102%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1130880

 Lab Sample ID:
 M85689-1
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	102%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1130880

 Lab Sample ID:
 M85689-1
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC31831.D 1 09/17/09 WZ 09/11/09 OP19467 GBC1670

Run #2

Initial Volume Final Volume

Run #1 980 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.157 0.082 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 114% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1130880 M85689-1 Lab Sample ID:

**Date Sampled:** 09/09/09 Matrix: AQ - Ground Water **Date Received:** 09/09/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70231.D 1 09/17/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

877-09-8

877-09-8

2051-24-3

2051-24-3

#### CT Polychlorinated Biphenyls RCP List

Tetrachloro-m-xylene

Tetrachloro-m-xylene

Decachlorobiphenyl

Decachlorobiphenyl

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

72%

82%

74%

76%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

30-150%

30-150%

30-150%

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



t of Analysis Page 1 of 1

 Client Sample ID:
 1130880UF

 Lab Sample ID:
 M85689-2

 Matrix:
 AQ - Ground Water

 Date Sampled:
 09/09/09

 Date Received:
 09/09/09

Percent Solids: n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
					00/40/00	00/4 = /00	2	2
Arsenic	< 4.0	4.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	376	200	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	37.4	25	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/11/09	09/11/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	79.7	40	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10944(2) Instrument QC Batch: MA10959(3) Prep QC Batch: MP14086(4) Prep QC Batch: MP14090

Client Sample ID: 1130879

 Lab Sample ID:
 M85689-3
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 P39765.D 1 09/11/09 AMY n/a n/a MSP1313

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130879 Lab Sample ID: M85689-3

 Lab Sample ID:
 M85689-3
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 100% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



## C

### **Report of Analysis**

Client Sample ID: 1130879

 Lab Sample ID:
 M85689-3
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Client Sample ID: 1130879

Lab Sample ID: M85689-3 **Date Sampled:** 09/09/09 Matrix: AQ - Ground Water **Date Received:** 09/09/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC31833.D 1 09/17/09 WZ 09/11/09 OP19467 GBC1670

Run #2

**Initial Volume Final Volume** Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.107 0.086 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 126% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130879 Lab Sample ID: M85689-3

 Lab Sample ID:
 M85689-3
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF70232.D 1 09/17/09 CZ 09/16/09 OP19488 GEF3230

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

2051-24-3

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	73%		30-150%
877-09-8	Tetrachloro-m-xylene	87%		30-150%

85%

85%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

## **Report of Analysis**

Client Sample ID: 1130879UF Lab Sample ID: M85689-4 **Date Sampled:** 09/09/09 Matrix: **Date Received:** 09/09/09 AQ - Ground Water

Percent Solids: n/a **Project:** UTC:Willow Brook & Pond 2008 Monitoring

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/10/09	09/15/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953 (2) Instrument QC Batch: MA10959 (3) Prep QC Batch: MP14086 (4) Prep QC Batch: MP14104

Page 1 of 3

Client Sample ID: 1130877 Lab Sample ID:

M85689-5 **Date Sampled:** 09/09/09 Matrix: AQ - Ground Water **Date Received:** 09/09/09 Method: SW846 8260B Percent Solids: n/a

UTC: Willow Brook & Pond 2008 Monitoring **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By MSP1313 Run #1 P39766.D 1 09/11/09 AMY n/a n/a

Run #2

**Purge Volume** 

Run #1  $5.0 \; ml$ 

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1130877 Lab Sample ID: M85689-5

 Lab Sample ID:
 M85689-5
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1, 1, 2, 2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	;

103%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1130877

 Lab Sample ID:
 M85689-5
 Date Sampled:
 09/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/09/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	98%		70-130%
460-00-4	4-Bromofluorobenzene	106%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 

N = Indicates presumptive evidence of a compound



4.



Misc. Forms

Custody Documents and Other Forms

### Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- · Chain of Custody
- RCP Form
- Sample Tracking Chronicle



## **Parameter Certification Exceptions**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC:Willow Brook & Pond 2008 Monitoring

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



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M85689: Chain of Custody

Page 1 of 1



### **Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form**

**Laboratory Name: Accutest New England** Client: Loureiro Eng. Associates

UTC:Willow Brook & Pond 2008 **Project Location: Project Number:** 88UT624 Monitoring

Sampling Date(s): 9/9/2009

Laboratory Sample ID(s): M85689-1, M85689-2, M85689-3, M85689-4, M85689-5

CT-FTPH 7/06 SW846 6010B 7470A 8082 8260B Methods:

Methods:	CT-ETPH 7/06, SW846 6010B, 7470A, 8082, 8260B		
1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes 🔽	No 🗖
1A	Where all the method specified preservation and holding time requirements met?	Yes 🔽	No 🔲
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes 🗖	No 🗆
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes 🔽	No 🗖
3	Were samples received at an appropriate temperature (<6° C)?	Yes 🗹	No 🗖
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes 🗖	No 🔽
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes 🔽	No 🗖
	b) Were these reporting limits met?	Yes	No 🔼
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes 🗖	No 🔽
7	Are project-specific matrix spikes and laboratory duplicates included in this data set?	Yes 🔽	No 🗖

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

l, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and beli
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

Signature: Position: Lab Director

Printed Name: Reza Tand Date: 9/22/2009

Accutest New England



## **Internal Sample Tracking Chronicle**

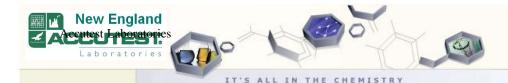
Loureiro Eng. Associates

Job No: M85689

UTC:Willow Brook & Pond 2008 Monitoring Project No: 88UT624

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes	
M85689-1 1130880	Collected: 09-SEP-09	Received: 09-SEP-09 By: JB					
M85689-1	SW846 8260B CT-ETPH 7/06 SW846 8082 Collected: 09-SEP-09	11-SEP-09 20:48 17-SEP-09 01:43 17-SEP-09 17:19 11:46 By: HG	CZ	11-SEP-09 16-SEP-09 ved: 09-SEP-	FG	V8260RCP BCTTPH P8082RCP	
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	SW846 7470A SW846 6010B	11-SEP-09 16:21 15-SEP-09 16:58		11-SEP-09 10-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN	
M85689-3 1130879	Collected: 09-SEP-09	13:19 By: HG	Receiv	ved: 09-SEP-	09 By:	JB	
M85689-3	SW846 8260B CT-ETPH 7/06 SW846 8082	11-SEP-09 21:16 17-SEP-09 02:22 17-SEP-09 21:45	AMY WZ CZ	11-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP	
M85689-4 1130879UF	Collected: 09-SEP-09	13:19 By: HG	Receiv	ved: 09-SEP-	09 By:	JB	
	SW846 7470A SW846 6010B	15-SEP-09 13:14 15-SEP-09 17:50		15-SEP-09 10-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN	
M85689-5 1130877	Collected: 09-SEP-09 13:00 By: HG			ved: 09-SEP-	09 By:	JB	
M85689-5	SW846 8260B	11-SEP-09 21:45	AMY			V8260RCP	





### GC/MS Volatiles

## QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



**Method:** SW846 8260B

## **Method Blank Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch
MSP1313-MB	P39752.D	1	09/11/09	AMY	n/a	n/a	MSP1313

The QC reported here applies to the following samples:

M85689-1, M85689-3, M85689-5

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



## **Method Blank Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	Analytical Batch
MSP1313-MB	P39752.D	1	09/11/09	AMY	n/a	n/a	MSP1313

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



## **Method Blank Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample MSP1313-MB	<b>File ID</b> P39752.D	<b>DF</b> 1	<b>Analyzed</b> 09/11/09	<b>By</b> AMY	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch MSP1313

#### The QC reported here applies to the following samples:

CAS No.	<b>Surrogate Recoveries</b>	Limits	
1868-53-7	Dibromofluoromethane	94%	70-130%
2037-26-5	Toluene-D8	98%	70-130%
460-00-4	4-Bromofluorobenzene	101%	70-130%



# Blank Spike Summary Job Number: M85689

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:** 

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSP1313-BS	P39750.D	1	09/11/09	AMY	n/a	n/a	MSP1313

The QC reported here applies to the following samples:

		Spike	BSP	BSP	
CAS No.	Compound	ug/l	ug/l	<b>%</b>	Limits
67-64-1	Acetone	50	67.4	135* a	70-130
107-13-1	Acrylonitrile	250	256	102	70-130
71-43-2	Benzene	50	50.9	102	70-130
108-86-1	Bromobenzene	50	52.0	104	70-130
75-27-4	Bromodichloromethane	50	49.5	99	70-130
75-25-2	Bromoform	50	46.0	92	70-130
74-83-9	Bromomethane	50	36.8	74	70-130
78-93-3	2-Butanone (MEK)	50	45.9	92	70-130
104-51-8	n-Butylbenzene	50	51.5	103	70-130
135-98-8	sec-Butylbenzene	50	55.6	111	70-130
98-06-6	tert-Butylbenzene	50	53.7	107	70-130
75-15-0	Carbon disulfide	50	49.3	99	70-130
56-23-5	Carbon tetrachloride	50	49.7	99	70-130
108-90-7	Chlorobenzene	50	50.6	101	70-130
75-00-3	Chloroethane	50	47.9	96	70-130
67-66-3	Chloroform	50	48.4	97	70-130
74-87-3	Chloromethane	50	34.3	69* a	70-130
95-49-8	o-Chlorotoluene	50	53.6	107	70-130
106-43-4	p-Chlorotoluene	50	54.0	108	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	48.0	96	70-130
124-48-1	Dibromochloromethane	50	53.1	106	70-130
106-93-4	1,2-Dibromoethane	50	51.5	103	70-130
95-50-1	1,2-Dichlorobenzene	50	52.0	104	70-130
541-73-1	1,3-Dichlorobenzene	50	51.5	103	70-130
106-46-7	1,4-Dichlorobenzene	50	50.2	100	70-130
75-71-8	Dichlorodifluoromethane	50	51.1	102	70-130
75-34-3	1,1-Dichloroethane	50	48.7	97	70-130
107-06-2	1,2-Dichloroethane	50	45.1	90	70-130
75-35-4	1,1-Dichloroethene	50	52.4	105	70-130
156-59-2	cis-1,2-Dichloroethene	50	51.8	104	70-130
156-60-5	trans-1,2-Dichloroethene	50	49.9	100	70-130
78-87-5	1,2-Dichloropropane	50	50.2	100	70-130
142-28-9	1,3-Dichloropropane	50	50.4	101	70-130
594-20-7	2,2-Dichloropropane	50	42.9	86	70-130
563-58-6	1,1-Dichloropropene	50	52.9	106	70-130
10061-01-5	cis-1,3-Dichloropropene	50	46.4	93	70-130



# Blank Spike Summary Job Number: M85689

Account: LEA Loureiro Eng. Associates

UTC: Willow Brook & Pond 2008 Monitoring **Project:** 

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	Analytical Batch
MSP1313-BS	P39750.D	1	09/11/09	AMY	n/a	n/a	MSP1313

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	46.7	93	70-130
100-41-4	Ethylbenzene	50	54.5	109	70-130
76-13-1	Freon 113	50	55.6	111	70-130
87-68-3	Hexachlorobutadiene	50	45.6	91	70-130
591-78-6	2-Hexanone	50	47.2	94	70-130
98-82-8	Isopropylbenzene	50	66.0	132* a	70-130
99-87-6	p-Isopropyltoluene	50	55.7	111	70-130
1634-04-4	Methyl Tert Butyl Ether	50	52.3	105	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.7	95	70-130
74-95-3	Methylene bromide	50	49.6	99	70-130
75-09-2	Methylene chloride	50	47.4	95	70-130
91-20-3	Naphthalene	50	40.4	81	70-130
103-65-1	n-Propylbenzene	50	56.8	114	70-130
100-42-5	Styrene	50	50.8	102	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	50.0	100	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	53.1	106	70-130
127-18-4	Tetrachloroethene	50	54.5	109	70-130
109-99-9	Tetrahydrofuran	50	50.3	101	70-130
108-88-3	Toluene	50	52.3	105	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	47.2	94	70-130
87-61-6	1,2,3-Trichlorobenzene	50	46.5	93	70-130
120-82-1	1,2,4-Trichlorobenzene	50	48.8	98	70-130
71-55-6	1,1,1-Trichloroethane	50	49.9	100	70-130
79-00-5	1,1,2-Trichloroethane	50	51.3	103	70-130
79-01-6	Trichloroethene	50	50.8	102	70-130
75-69-4	Trichlorofluoromethane	50	48.8	98	70-130
96-18-4	1,2,3-Trichloropropane	50	48.8	98	70-130
95-63-6	1,2,4-Trimethylbenzene	50	57.7	115	70-130
108-67-8	1,3,5-Trimethylbenzene	50	56.3	113	70-130
75-01-4	Vinyl chloride	50	49.9	100	70-130
	m,p-Xylene	100	112	112	70-130
95-47-6	o-Xylene	50	54.9	110	70-130



### **Blank Spike Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

Project: UTC: Willow Brook & Pond 2008 Monitoring

Sample MSP1313-BS	<b>File ID</b> P39750.D	<b>DF</b> 1	<b>Analyzed</b> 09/11/09	By AMY	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch MSP1313

The QC reported here applies to the following samples:

M85689-1, M85689-3, M85689-5

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
2037-26-5	Dibromofluoromethane	96%	70-130%
	Toluene-D8	101%	70-130%
	4-Bromofluorobenzene	101%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



**Method:** SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M85683-6MS	P39773.D	5	09/12/09	AMY	n/a	n/a	MSP1313
M85683-6MSD	P39774.D	5	09/12/09	AMY	n/a	n/a	MSP1313
M85683-6	P39762.D	1	09/11/09	AMY	n/a	n/a	MSP1313

The QC reported here applies to the following samples:

CAS No.	Compound	M85683-6 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	246	98	234	94	5	70-130/30
107-13-1	Acrylonitrile	ND	1250	1290	103	1210	97	6	70-130/30
71-43-2	Benzene	ND	250	262	105	261	104	0	70-130/30
108-86-1	Bromobenzene	ND	250	246	98	246	98	0	70-130/30
75-27-4	Bromodichloromethane	ND	250	279	112	273	109	2	70-130/30
75-25-2	Bromoform	ND	250	234	94	233	93	0	70-130/30
74-83-9	Bromomethane	ND	250	77.0	31* a	103	41* a	29	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	260	104	254	102	2	70-130/30
104-51-8	n-Butylbenzene	ND	250	245	98	254	102	4	70-130/30
135-98-8	sec-Butylbenzene	ND	250	272	109	277	111	2	70-130/30
98-06-6	tert-Butylbenzene	ND	250	278	111	282	113	1	70-130/30
75-15-0	Carbon disulfide	ND	250	272	109	263	105	3	70-130/30
56-23-5	Carbon tetrachloride	ND	250	253	101	255	102	1	70-130/30
108-90-7	Chlorobenzene	ND	250	245	98	243	97	1	70-130/30
75-00-3	Chloroethane	ND	250	254	102	248	99	2	70-130/30
67-66-3	Chloroform	ND	250	274	110	260	104	5	70-130/30
74-87-3	Chloromethane	ND	250	198	79	191	76	4	70-130/30
95-49-8	o-Chlorotoluene	ND	250	266	106	265	106	0	70-130/30
106-43-4	p-Chlorotoluene	ND	250	271	108	271	108	0	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	229	92	244	98	6	70-130/30
124-48-1	Dibromochloromethane	ND	250	268	107	267	107	0	70-130/30
106-93-4	1,2-Dibromoethane	ND	250	249	100	249	100	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	251	100	258	103	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	252	101	254	102	1	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	246	98	248	99	1	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	280	112	283	113	1	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	265	106	256	102	3	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	264	106	262	105	1	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	267	107	261	104	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	265	106	253	101	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	246	98	249	100	1	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	261	104	257	103	2	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	254	102	252	101	1	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	205	82	195	78	5	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	279	112	271	108	3	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND	250	224	90	222	89	1	70-130/30

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**Method:** SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M85683-6MS	P39773.D	5	09/12/09	AMY	n/a	n/a	MSP1313
M85683-6MSD	P39774.D	5	09/12/09	AMY	n/a	n/a	MSP1313
M85683-6	P39762.D	1	09/11/09	AMY	n/a	n/a	MSP1313

The QC reported here applies to the following samples:

CAS No.	Compound	M85683 ug/l	-6 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	227	91	219	88	4	70-130/30
100-41-4	Ethylbenzene	ND		250	269	108	267	107	1	70-130/30
76-13-1	Freon 113	ND		250	275	110	270	108	2	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	222	89	231	92	4	70-130/30
591-78-6	2-Hexanone	ND		250	215	86	187	75	14	70-130/30
98-82-8	Isopropylbenzene	ND		250	317	127	320	128	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	270	108	275	110	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	265	106	253	101	5	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	232	93	220	88	5	70-130/30
74-95-3	Methylene bromide	ND		250	267	107	260	104	3	70-130/30
75-09-2	Methylene chloride	ND		250	250	100	246	98	2	70-130/30
91-20-3	Naphthalene	ND		250	156	62* a	160	64* a	3	70-130/30
103-65-1	n-Propylbenzene	ND		250	275	110	278	111	1	70-130/30
100-42-5	Styrene	ND		250	242	97	243	97	0	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	257	103	254	102	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	257	103	256	102	0	70-130/30
127-18-4	Tetrachloroethene	ND		250	260	104	256	102	2	70-130/30
109-99-9	Tetrahydrofuran	ND		250	252	101	222	89	13	70-130/30
108-88-3	Toluene	ND		250	267	107	262	105	2	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	218	87	211	84	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	213	85	226	90	6	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	221	88	233	93	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	296	118	280	112	6	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	263	105	262	105	0	70-130/30
79-01-6	Trichloroethene	ND		250	271	108	266	106	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	285	114	275	110	4	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	223	89	229	92	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	282	113	290	116	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	277	111	280	112	1	70-130/30
75-01-4	Vinyl chloride	ND		250	277	111	274	110	1	70-130/30
	m,p-Xylene	ND		500	549	110	542	108	1	70-130/30
95-47-6	o-Xylene	ND		250	276	110	273	109	1	70-130/30



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**Method:** SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M85683-6MS	P39773.D	5	09/12/09	AMY	n/a	n/a	MSP1313
M85683-6MSD	P39774.D	5	09/12/09	AMY	n/a	n/a	MSP1313
M85683-6	P39762.D	1	09/11/09	AMY	n/a	n/a	MSP1313

#### The QC reported here applies to the following samples:

M85689-1, M85689-3, M85689-5

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M85683-6	Limits
	Dibromofluoromethane	100%	101%	99%	70-130%
	Toluene-D8	101%	101%	98%	70-130%
	4-Bromofluorobenzene	99%	98%	105%	70-130%

(a) Outside control limits due to possible matrix interference. Refer to Blank Spike.

### **Volatile Internal Standard Area Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Check Std:MSP1313-CC1310Injection Date:09/11/09Lab File ID:P39749.DInjection Time:13:48

**Instrument ID:** GCMSP **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a	294249 588498	8.89 9.39	421867 843734	9.76 10.26	255922 511844	13.00 13.50	187303 374606		69813 139626	6.61 7.11
Lower Limit ^b	147125	8.39	210934	9.26	127961	12.50	93652	15.06	34907	6.11
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSP1313-BS	289836	8.89	413789	9.76	252587	13.01	182528	15.56	72688	6.60
MSP1313-MB	262644	8.90	374969	9.77	214897	13.01	152521	15.57	50066	6.64
ZZZZZZ	255677	8.90	366854	9.77	206700	13.01	146551	15.57	57787	6.65
ZZZZZZ	250243	8.90	354408	9.76	205279	13.01	141372	15.57	54249	6.66
ZZZZZZ	242611	8.90	339129	9.77	195897	13.01	135005	15.57	50200	6.67
ZZZZZZ	236059	8.90	338216	9.77	194261	13.01	133609	15.57	57520	6.64
ZZZZZZ	241559	8.89	342484	9.76	197823	13.01	146609	15.57	54777	6.63
ZZZZZZ	240777	8.90	343092	9.77	192655	13.01	135559	15.57	67543	6.65
M85683-6	212320	8.90	303774	9.77	177616	13.01	121268	15.57	46344	6.66
ZZZZZZ	206040	8.90	295505	9.77	175536	13.01	120661	15.57	45392	6.67
M85689-1	206897	8.90	282930	9.76	173601	13.01	115394	15.57	53553	6.65
M85689-3	202075	8.90	284338	9.77	166332	13.01	111208	15.57	45786	6.67
M85689-5	199981	8.90	280628	9.77	166430	13.01	111011	15.57	47168	6.66
ZZZZZZ	194294	8.90	276171	9.77	162042	13.01	114501	15.57	45810	6.67
ZZZZZZ	190931	8.89	270071	9.77	163231	13.01	114805	15.57	55378	6.65
ZZZZZZ	189072	8.90	269904	9.77	161037	13.01	109009	15.57	41877	6.66
ZZZZZZ	187700	8.90	263531	9.77	156853	13.01	107722	15.57	38930	6.67
ZZZZZZ	179247	8.89	256383	9.77	154355	13.01	102558	15.57	39574	6.66
ZZZZZZ	179273	8.89	255110	9.77	154665	13.01	107176	15.57	42040	6.66
M85683-6MS	201600	8.89	285884	9.76	182969	13.00	140049	15.56	53780	6.60
M85683-6MSD	216622	8.89	303946	9.76	193153	13.00	145264	15.56	45581	6.62

IS 1 = Pentafluorobenzene IS 2 = 1,4-Difluorobenzene IS 3 = Chlorobenzene-D5 IS 4 = 1,4-Dichlorobenzene-d4 IS 5 = Tert Butyl Alcohol-D9

(a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

(b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



### **Volatile Surrogate Recovery Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Method: SW846 8260B Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1	S2	S3
M85689-1	P39764.D	102.0	102.0	106.0
M85689-3	P39765.D	100.0	98.0	106.0
M85689-5	P39766.D	103.0	98.0	106.0
M85683-6MS	P39773.D	100.0	101.0	99.0
M85683-6MSD	P39774.D	101.0	101.0	98.0
MSP1313-BS	P39750.D	96.0	101.0	101.0
MSP1313-MB	P39752.D	94.0	98.0	101.0

Surrogate Recovery Compounds Limits

 $\mathbf{S1} = \text{Dibromofluoromethane}$  70-130%  $\mathbf{S2} = \text{Toluene-D8}$  70-130%  $\mathbf{S3} = 4\text{-Bromofluorobenzene}$  70-130%





## GC Semi-volatiles

## QC Data Summaries

### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



**Method:** CT-ETPH 7/06

### **Method Blank Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample OP19467-MB	File ID BC31744.D	<b>DF</b> 1	<b>Analyzed</b> 09/14/09	By WZ	<b>Prep Date</b> 09/11/09	<b>Prep Batch</b> OP19467	Analytical Batch GBC1667

The QC reported here applies to the following samples:

M85689-1, M85689-3

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 79% 50-149%



**Method:** SW846 8082

### **Method Blank Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample OP19488-MB	File ID EF70226.D	<b>DF</b> 1	<b>Analyzed</b> 09/17/09	By CZ	<b>Prep Date</b> 09/16/09	Prep Batch OP19488	Analytical Batch GEF3230

#### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	119/1

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	85%	30-150%
877-09-8	Tetrachloro-m-xylene	82%	30-150%
2051-24-3	Decachlorobiphenyl	44%	30-150%
2051-24-3	Decachlorobiphenyl	46%	30-150%



**Method:** CT-ETPH 7/06

### **Blank Spike Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample OP19467-BS	File ID BC31746.D	<b>DF</b> 1	<b>Analyzed</b> 09/14/09	By WZ	<b>Prep Date</b> 09/11/09	Prep Batch OP19467	Analytical Batch GBC1667

The QC reported here applies to the following samples:

M85689-1, M85689-3

CAS No. Compound Spike BSP BSP mg/l mg/l % Limits

CT-DRO (C9-C36) 0.7 0.534 76 60-120

CAS No. Surrogate Recoveries BSP Limits
3386-33-2 1-Chlorooctadecane 84% 50-149%



**Method:** SW846 8082

# Blank Spike Summary Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample OP19488-BS	File ID EF70227.D	<b>DF</b> 1	<b>Analyzed</b> 09/17/09	By CZ	<b>Prep Date</b> 09/16/09	Prep Batch OP19488	Analytical Batch GEF3230

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.3	115	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	2.0	100	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
877-09-8	Tetrachloro-m-xylene	90%	30-150%
877-09-8	Tetrachloro-m-xylene	89%	30-150%
2051-24-3	Decachlorobiphenyl	51%	30-150%
2051-24-3	Decachlorobiphenyl	50%	30-150%



**Method:** CT-ETPH 7/06

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
OP19467-MS	BC31748.D	1	09/14/09	WZ	09/11/09	OP19467	GBC1667
OP19467-MSD	BC31750.D	1	09/14/09	WZ	09/11/09	OP19467	GBC1667
M85661-13	BC31752.D	1	09/14/09	WZ	09/11/09	OP19467	GBC1667

The QC reported here applies to the following samples:

CAS No.	Compound	M85661-13 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.645	92	0.622	89	4	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8	5661-13	Limits			
3386-33-2	1-Chlorooctadecane	92%	87%	80%	ó	50-149%	)		



**Method:** SW846 8082

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP19488-MS	EF70228.D	1	09/17/09	CZ	09/16/09	OP19488	GEF3230
OP19488-MSD	EF70229.D	1	09/17/09	CZ	09/16/09	OP19488	GEF3230
M85833-10	EF70230.D	1	09/17/09	CZ	09/16/09	OP19488	GEF3230

The QC reported here applies to the following samples:

CAS No.	Compound	M85833-10 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2	Aroclor 1016	ND	2	2.2	110	2.1	105	5	40-140/50
11104-28-2	Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5	Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND	2	2.1	105	1.9	95	10	40-140/50
37324-23-5	Aroclor 1262	ND		ND		ND		nc	40-140/50
11100-14-4	Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	M85833-10	Limits
877-09-8	Tetrachloro-m-xylene	82%	73%	80%	30-150%
877-09-8	Tetrachloro-m-xylene	82%	84%	89%	30-150%
2051-24-3	Decachlorobiphenyl	45%	47%	48%	30-150%
2051-24-3	Decachlorobiphenyl	46%	48%	46%	30-150%



### Semivolatile Surrogate Recovery Summary

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Method: CT-ETPH 7/06 Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	
File ID	<b>S1</b> ^a
DC21021 D	1140
	114.0
BC31833.D	126.0
BC31746.D	84.0
BC31744.D	79.0
BC31748.D	92.0
BC31750.D	87.0
	File ID  BC31831.D BC31833.D BC31746.D BC31744.D BC31748.D

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



### **Semivolatile Surrogate Recovery Summary**

Job Number: M85689

Account: LEA Loureiro Eng. Associates

**Project:** UTC: Willow Brook & Pond 2008 Monitoring

Method: SW846 8082 Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab Sample ID	Lab File ID	S1 a	<b>S1</b> b	S2 a	<b>S2</b> b
M85689-1	EF70231.D	72.0	82.0	74.0	76.0
M85689-3	EF70232.D	73.0	87.0	85.0	85.0
OP19488-BS	EF70227.D	90.0	89.0	51.0	50.0
OP19488-MB	EF70226.D	85.0	82.0	44.0	46.0
OP19488-MS	EF70228.D	82.0	82.0	45.0	46.0
OP19488-MSD	EF70229.D	73.0	84.0	47.0	48.0

Surrogate Recovery Compounds Limits

S1 = Tetrachloro-m-xylene 30-150% S2 = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1

(b) Recovery from GC signal #2





## Metals Analysis

## QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

# Login Number: M85689 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:

09/10/09

Prep Date.					09/10/09
Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	27	40		
Antimony	6.0	1.4	1.6		
Arsenic	10	1	1.8	-1.2	<10
Barium	200	.57	1.1	-0.10	<200
Beryllium	4.0	.15	. 4		
Boron	100	.65	2.3		
Cadmium	4.0	.24	1.9	-0.10	<4.0
Calcium	5000	7.6	15		
Chromium	10	.81	1.1	-0.30	<10
Cobalt	50	. 25	.3		
Copper	25	2.2	4	0.10	<25
Gold	50	1.1	4.2		
Iron	100	3.7	13		
Lead	5.0	1.1	2.7	0.70	<5.0
Magnesium	5000	37	77		
Manganese	15	.12	1.1		
Molybdenum	100	.22	.8		
Nickel	40	.24	1.3	-0.10	<40
Palladium	50	2.2	4		
Platinum	50	9.3	13		
Potassium	5000	39	46		
Selenium	10	1.9	3.5	0.0	<10
Silicon	100	8.9	36		
Silver	5.0	.54	1.3	-0.20	<5.0
Sodium	5000	61	160		
Strontium	10	. 24	.3		
Thallium	10	1.2	1.3		
Tin	100	.65	1.3		
Titanium	50	.74	.8		
Tungsten	100	5.6	8		
Vanadium	30	.68	1.6		
Zinc	20	.74	1.5	0.70	<20

Associated samples MP14086: M85689-2, M85689-4



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M85689

Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85689 Account: LEA - Loureiro Eng. Associates Project: UTC: Willow Brook & Pond 2008 Monitoring

QC

M85689-2

09/10/09

RPD

QC

0-20

0-20

0-20

3.7 0-20

QC Batch ID: MP14086 Methods: SW846 6010B Units: ug/l Matrix Type: AQUEOUS

Spikelot

MPICP

Prep Date:

Manganese Molybdenum Nickel

Palladium Platinum Potassium Selenium

Silicon Silver

Sodium Strontium Thallium

Tin Titanium Tungsten Vanadium

Zinc

79.7

0.0

0.0

anr

13.1

560

539

216

500

500

200

500

96.1

107.8

108.0

75-125

75-125

75-125

79.7

0.0

0.0

80.8

0.0

0.0

13.6

1.4

NC

NC

Metal

M85689-2

09/10/09

Original MS % Rec Limits Original DUP Limits Aluminum Antimony anr Arsenic 0.0 528 105.6 500 75-125 0.0 0.0 NC: 0-20 Barium 376 2350 2000 98.7 75-125 376 381 1.3 0-20 Beryllium anr Boron Cadmium 1.4 541 500 107.9 75-125 1.4 1.6 13.3 0-20 Calcium Chromium 6.2 496 500 98.0 75-125 6.2 6.0 3.3 0-20 Cobalt Copper 37.4 555 500 103.5 75-125 37.4 39.0 4.2 0-20 Gold Iron Lead 0.0 965 1000 96.5 75-125 0.0 0.0 NC 0-20 Magnesium

Associated samples MP14086: M85689-2, M85689-4



101.4 75-125 13.1

#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85689 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85689
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Methods: SW846 6010B Matrix Type: AOUEOUS Units: ug/l

Matrix Type:	AQUEOUS		Units: ug/l							
Prep Date:			09/10/09			09/10/09				
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit	
Aluminum										
Antimony	anr									
Arsenic	511	500	102.2	80-120	515	500	103.0	0.8	20	
Barium	1960	2000	98.0	80-120	1950	2000	97.5	0.5	20	
Beryllium	anr									
Boron										
Cadmium	514	500	102.8	80-120	533	500	106.6	3.6	20	
Calcium										
Chromium	487	500	97.4	80-120	492	500	98.4	1.0	20	
Cobalt										
Copper	501	500	100.2	80-120	513	500	102.6	2.4	20	
Gold										
Iron										
Lead	979	1000	97.9	80-120	997	1000	99.7	1.8	20	
Magnesium										
Manganese										
Molybdenum										
Nickel	485	500	97.0	80-120	489	500	97.8	0.8	20	
Palladium										
Platinum										
Potassium										
Selenium	523	500	104.6	80-120	533	500	106.6	1.9	20	
Silicon										
Silver	204	200	102.0	80-120	207	200	103.5	1.5	20	
Sodium										
Strontium										
Thallium	anr									
Tin										
Titanium										
Tungsten										
Vanadium										
Zinc	504	500	100.8	80-120	519	500	103.8	2.9	20	

Associated samples MP14086: M85689-2, M85689-4



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85689
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

#### SERIAL DILUTION RESULTS SUMMARY

# Login Number: M85689 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/10/09

Associated samples MP14086: M85689-2, M85689-4

Prep Date.			09/10/09	
Metal	M85689-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony	anr			
Arsenic	0.00	0.00	NC	0-10
Barium	376	369	1.7	0-10
Beryllium	anr			
Boron				
Cadmium	1.40	0.00	100.0(a)	0-10
Calcium				
Chromium	6.20	5.20	16.1 (a)	0-10
Cobalt				
Copper	37.4	35.9	4.0	0-10
Gold				
Iron				
Lead	0.00	0.00	NC	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	79.7	79.4	0.4	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium	anr			
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	13.1	13.5	3.1	0-10



#### SERIAL DILUTION RESULTS SUMMARY

Login Number: M85689
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14086 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M85689

Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14090 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/11/09

Associated samples MP14090: M85689-2

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85689 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14090 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

09/11/09 09/11/09 Prep Date:

Metal	M85471-7A Original MS		Spikelot HGRWS1 % Rec		QC Limits	M85471-7A nits Original DUP		RPD	QC Limits
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20

Associated samples MP14090: M85689-2

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\hfill \hfill \h$ 

(N) Matrix Spike Rec. outside of QC limits



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85689
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14090 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/11/09 09/11/09

Metal	BSP Result	Spikelot HGRWS1		QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.1	3	103.3	80-120	3.1	3	103.3	0.0	20

Associated samples MP14090: M85689-2

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M85689

Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/15/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.035	.048	0.023	<0.20

Associated samples MP14104: M85689-4

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 

(anr) Analyte not requested

____



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85689 Account: LEA - Loureiro Eng. Associates Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/15/09 09/15/09

Metal	M85739-2 Original		Spikelot HGRWS1		QC Limits	M85739-2 Original		RPD	QC Limits
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20

Associated samples MP14104: M85689-4

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\hfill \hfill \h$ 

(N) Matrix Spike Rec. outside of QC limits



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85689
Account: LEA - Loureiro Eng. Associates
Project: UTC:Willow Brook & Pond 2008 Monitoring

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/15/09 09/15/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.9	3	96.7	0.0	20

Associated samples MP14104: M85689-4

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 

(anr) Analyte not requested

_____





09/25/09

09/25/09

#### Technical Report for

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M85739

Sampling Date: 09/10/09

#### Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: 100





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579) NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

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1 of 100

ACCUTEST

M85739

Laboratorie

Lab Director

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## **Sample Summary**

Job No:

M85739

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
M85739-1	09/10/09	09:30 RZ	09/10/09	AQ	Ground Water	1130878
M85739-2	09/10/09	09:30 RZ	09/10/09	AQ	Ground Water	1130878UF
M85739-3	09/10/09	11:40 RZ	09/10/09	AQ	Ground Water	1130881
M85739-4	09/10/09	11:40 RZ	09/10/09	AQ	Ground Water	1130881UF
M85739-5	09/10/09	13:05 RZ	09/10/09	AQ	Ground Water	1130882
M85739-6	09/10/09	13:05 RZ	09/10/09	AQ	Ground Water	1130882UF
M85739-7	09/10/09	14:45 RZ	09/10/09	AQ	Ground Water	1130883
M85739-8	09/10/09	14:45 RZ	09/10/09	AQ	Ground Water	1130883UF
M85739-9	09/10/09	09:24 HG	09/10/09	AQ	Ground Water	1130885
M85739-10	09/10/09	09:24 HG	09/10/09	AQ	Ground Water	1130885UF
M85739-11	09/10/09	10:56 HG	09/10/09	AQ	Ground Water	1130886
M85739-12	09/10/09	10:56 HG	09/10/09	AQ	Ground Water	1130886UF
M85739-13	09/10/09	13:11 HG	09/10/09	AQ	Ground Water	1130887





# Sample Summary (continued)

Job No:

M85739

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matr Code	<del></del>	Client Sample ID
M85739-14	09/10/09	13:11 HG	09/10/09	AQ	Ground Water	1130887UF
M85739-15	09/10/09	15:14 HG	09/10/09	AQ	Ground Water	1130888
M85739-16	09/10/09	15:14 HG	09/10/09	AQ	Ground Water	1130888UF
M85739-17	09/10/09	14:00 HG	09/10/09	AQ	Ground Water	1130889





### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M85739

**Site:** UTC: 2009 Quarterly GW-Willow Pond **Report Date** 9/22/2009 3:36:18 PM

17 Sample(s) were collected on 09/10/2009 and were received at Accutest on 09/10/2009 properly preserved, at 1.9 Deg. C and intact. These Samples received an Accutest job number of M85739. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

### Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSN1361

- All samples were analyzed within the recommended method holding time.
- Sample(s) M85748-18MS, M85748-18MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- BS, MS, MSD Recovery(s) for Isopropylbenzene are outside control limits. Blank Spike meets program technical requirements.
- MS/MSD Recovery(s) for 1,1,2,2-Tetrachloroethane, Acetone are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Initial calibration standard MSN1359-ICC1359 for 2,2-dichloropropane is employed quadratic regression

Initial calibration verification standard MSN1359-ICV1359 for dichlorodifluoromethane exceed 35% Difference.

Continuing calibration check standard for isopropylbenzene exceed 30% Difference. This check standard met RCP criteria.

### Extractables by GC By Method CT-ETPH 7/06

Matrix AQ Batch ID: OP19479

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85833-2MS, M85833-2MSD were used as the QC samples indicated.

### Extractables by GC By Method SW846 8082

Matrix AQ Batch ID: OP19488

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M85833-10MS, M85833-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.



### Metals By Method SW846 6010B

Matrix AQ Batch ID: MP14096

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85739-2DUP, M85739-2MS, M85739-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Nickel, Zinc are outside control limits for sample MP14096-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Only selected metals requested.

### Metals By Method SW846 7470A

Matrix AQ Batch ID: MP14104

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85739-2DUP, M85739-2MS were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M85739).



# Sample Results

Report of Analysis



Client Sample ID: 1130878

 Lab Sample ID:
 M85739-1
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36497.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	2.1	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1130878 Lab Sample ID: M85739-1

 Lab Sample ID:
 M85739-1
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units (	)
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	

91%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1130878

 Lab Sample ID:
 M85739-1
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	94%		70-130%
460-00-4	4-Bromofluorobenzene	98%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



## **Report of Analysis**

Client Sample ID: 1130878

Lab Sample ID: M85739-1 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC31832.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

**Initial Volume Final Volume** Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.106 0.080 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 70% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



## **Report of Analysis**

Client Sample ID: 1130878 Lab Sample ID: M85739-1

**Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70233.D 1 09/17/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1221 Aroclor 1232	ND ND ND	0.25 0.25 0.25	ug/l ug/l ug/l
53469-21-9 12672-29-6	Aroclor 1242 Aroclor 1248	ND ND	0.25 0.25	ug/l ug/l
11097-69-1 11096-82-5	Aroclor 1254 Aroclor 1260	ND	0.25 0.25	ug/l
37324-23-5	Aroclor 1262	ND ND	0.25	ug/l ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	76%		30-150%
877-09-8 2051-24-3	Tetrachloro-m-xylene Decachlorobiphenyl	88% 87%		30-150% 30-150%

86%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



## **Report of Analysis**

Client Sample ID: 1130878UF Lab Sample ID: M85739-2

**Date Sampled:** 09/10/09 **Date Received:** 09/10/09 AQ - Ground Water

Percent Solids: n/a **Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Matrix:

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953 (2) Instrument QC Batch: MA10962 (3) Prep QC Batch: MP14096 (4) Prep QC Batch: MP14104

Client Sample ID: 1130881

 Lab Sample ID:
 M85739-3
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36498.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

Compound	Result	RL	Units	Q
Acetone	ND	5.0	ug/l	
Acrylonitrile	ND	25	ug/l	
Benzene	ND	0.50	ug/l	
Bromobenzene	ND	5.0	ug/l	
Bromodichloromethane	ND	1.0	ug/l	
Bromoform	ND	1.0	ug/l	
Bromomethane	ND	2.0	ug/l	
2-Butanone (MEK)	ND	5.0	ug/l	
n-Butylbenzene	ND	5.0	ug/l	
sec-Butylbenzene	ND	5.0	ug/l	
tert-Butylbenzene	ND	5.0	ug/l	
Carbon disulfide	ND	5.0	ug/l	
Carbon tetrachloride	ND	1.0	ug/l	
Chlorobenzene	ND	1.0	ug/l	
Chloroethane	ND	2.0	ug/l	
Chloroform	ND	1.0	ug/l	
Chloromethane	ND	2.0	ug/l	
o-Chlorotoluene	ND	5.0	ug/l	
p-Chlorotoluene	ND	5.0	ug/l	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
Dibromochloromethane	ND	1.0	ug/l	
1,2-Dibromoethane	ND	2.0	ug/l	
1,2-Dichlorobenzene	ND	1.0	ug/l	
1,3-Dichlorobenzene	ND	1.0	ug/l	
1,4-Dichlorobenzene	ND	1.0	ug/l	
Dichlorodifluoromethane	ND	2.0	ug/l	
1,1-Dichloroethane	ND	1.0	ug/l	
	ND	1.0	ug/l	
1,1-Dichloroethene	ND	1.0	ug/l	
cis-1,2-Dichloroethene	ND	1.0	ug/l	
trans-1,2-Dichloroethene	ND	1.0	ug/l	
1,2-Dichloropropane	ND	2.0	ug/l	
	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane 2-Butanone (MEK) n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotehane Chlorotoluene p-Chlorotoluene p-Chlorotoluene 1,2-Dibromo-3-chloropropane Dibromochloromethane 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorotehane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromodichloromethane Bromoform ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Carbutanone (MEK) ND N-Butylbenzene ND Sec-Butylbenzene ND Carbon disulfide ND Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotenane ND Chloroform ND Chloromethane ND 0-Chlorotoluene ND 1,2-Dibromo-3-chloropropane Dibromochloromethane ND 1,2-Dichlorobenzene ND 1,3-Dichlorobenzene ND 1,4-Dichlorobenzene ND 1,4-Dichlorotenane ND 1,1-Dichloroethane ND 1,1-Dichloroethene ND trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Benzene ND Bromobenzene ND Bromodichloromethane ND Bromoform ND Bromomethane ND 2.0 2-Butanone (MEK) ND ND S.0 N-Butylbenzene ND S.0 sec-Butylbenzene ND S.0 Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotoromethane ND Chlorotoromethane ND	Acctone         ND         5.0         ug/l           Acrylonitrile         ND         25         ug/l           Benzene         ND         0.50         ug/l           Bromobenzene         ND         5.0         ug/l           Bromodichloromethane         ND         1.0         ug/l           Bromoform         ND         1.0         ug/l           2-Butanone (MEK)         ND         1.0         ug/l           n-Butylbenzene         ND         5.0         ug/l           sec-Butylbenzene         ND         5.0         ug/l           sec-Butylbenzene         ND         5.0         ug/l           Carbon disulfide         ND         5.0         ug/l           Carbon disulfide         ND         1.0         ug/l           Chlorob

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

 $N = \ Indicates \ presumptive \ evidence \ of \ a \ compound$ 



## C

## **Report of Analysis**

Client Sample ID: 1130881

 Lab Sample ID:
 M85739-3
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	ts

1868-53-7 Dibromofluoromethane 91% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1130881

 Lab Sample ID:
 M85739-3
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



## **Report of Analysis**

Client Sample ID: 1130881

Lab Sample ID: M85739-3 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC31834.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

**Initial Volume Final Volume** Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 61% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



## **Report of Analysis**

Client Sample ID: 1130881 Lab Sample ID:

M85739-3 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70234.D 1 09/17/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262	ND	0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	80% 94% 92%		30-150% 30-150% 30-150%

91%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



## **Report of Analysis**

Client Sample ID: 1130881UF Lab Sample ID: M85739-4

**Date Sampled:** 09/10/09 Matrix: **Date Received:** 09/10/09 AQ - Ground Water

Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953 (2) Instrument QC Batch: MA10962 (3) Prep QC Batch: MP14096 (4) Prep QC Batch: MP14104

Client Sample ID: 1130882

 Lab Sample ID:
 M85739-5
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36499.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.9	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



## C

## **Report of Analysis**

Client Sample ID: 1130882

 Lab Sample ID:
 M85739-5
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limi	its
1868-53-7	Dibromofluoromethane	91%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



## C

## **Report of Analysis**

Client Sample ID: 1130882

 Lab Sample ID:
 M85739-5
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Page 1 of 1

Client Sample ID: 1130882

 Lab Sample ID:
 M85739-5
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC31836.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

Initial Volume Final Volume Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 72% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130882 Lab Sample ID: M85739-5

**Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70235.D 1 09/17/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

Compound	Result	RL	Units	Q
Aroclor 1016	ND	0.25	ug/l	
Aroclor 1221	ND	0.25	ug/l	
Aroclor 1232	ND	0.25	ug/l	
Aroclor 1242	ND	0.25	ug/l	
Aroclor 1248	ND	0.25	ug/l	
Aroclor 1254	ND	0.25	ug/l	
Aroclor 1260	ND	0.25	ug/l	
Aroclor 1262	ND	0.25	ug/l	
Aroclor 1268	ND	0.25	ug/l	
Surrogate Recoveries	Run# 1	Run# 2	Limi	its
Tetrachloro-m-xylene	84%		30-1	50%
•	87%			
Decachlorobiphenyl	83%			
	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268  Surrogate Recoveries  Tetrachloro-m-xylene Tetrachloro-m-xylene	Aroclor 1016 ND Aroclor 1221 ND Aroclor 1232 ND Aroclor 1242 ND Aroclor 1248 ND Aroclor 1254 ND Aroclor 1260 ND Aroclor 1262 ND Aroclor 1268 ND  Surrogate Recoveries Run# 1  Tetrachloro-m-xylene 84% Tetrachloro-m-xylene 87%	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268  Surrogate Recoveries  ND  0.25  Run# 1  Run# 2  Tetrachloro-m-xylene Tetrachloro-m-xylene 84% Tetrachloro-m-xylene 87%	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268  Surrogate Recoveries  ND  0.25 ug/l Arol 0.25 ug/l Ar

83%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130882UF

Lab Sample ID:M85739-6Date Sampled:09/10/09Matrix:AQ - Ground WaterDate Received:09/10/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	1	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

Client Sample ID: 1130883

 Lab Sample ID:
 M85739-7
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36500.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

Compound	Result	RL	Units	Q
Acetone	ND	5.0	ug/l	
Acrylonitrile	ND	25	ug/l	
Benzene	ND	0.50	ug/l	
Bromobenzene	ND	5.0	ug/l	
Bromodichloromethane	ND	1.0	ug/l	
Bromoform	ND	1.0	ug/l	
Bromomethane	ND	2.0	ug/l	
2-Butanone (MEK)	ND	5.0	ug/l	
n-Butylbenzene	ND	5.0	ug/l	
sec-Butylbenzene	ND	5.0	ug/l	
tert-Butylbenzene	ND	5.0	ug/l	
Carbon disulfide	ND	5.0	ug/l	
Carbon tetrachloride	ND	1.0	ug/l	
Chlorobenzene	ND	1.0	ug/l	
Chloroethane	ND	2.0	ug/l	
Chloroform	ND	1.0	ug/l	
Chloromethane	ND	2.0	ug/l	
o-Chlorotoluene	ND	5.0	ug/l	
p-Chlorotoluene	ND	5.0	ug/l	
1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
Dibromochloromethane	ND	1.0	ug/l	
1,2-Dibromoethane	ND	2.0	ug/l	
1,2-Dichlorobenzene	ND	1.0	ug/l	
1,3-Dichlorobenzene	ND	1.0	ug/l	
1,4-Dichlorobenzene	ND	1.0	ug/l	
Dichlorodifluoromethane	ND	2.0	ug/l	
1,1-Dichloroethane	ND	1.0	ug/l	
	ND	1.0	ug/l	
1,1-Dichloroethene	ND	1.0	ug/l	
cis-1,2-Dichloroethene	ND	1.0	ug/l	
trans-1,2-Dichloroethene	ND	1.0	ug/l	
1,2-Dichloropropane	ND	2.0	ug/l	
	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromoform Bromomethane 2-Butanone (MEK) n-Butylbenzene sec-Butylbenzene tert-Butylbenzene Carbon disulfide Carbon tetrachloride Chlorobenzene Chlorotehane Chlorotoluene p-Chlorotoluene p-Chlorotoluene 1,2-Dibromo-3-chloropropane Dibromochloromethane 1,2-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorobenzene 1,4-Dichlorotehane 1,1-Dichloroethane 1,1-Dichloroethane 1,1-Dichloroethane 1,2-Dichloroethene cis-1,2-Dichloroethene trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Bromobenzene Bromodichloromethane Bromodichloromethane Bromoform ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Bromomethane ND Carbutanone (MEK) ND N-Butylbenzene ND Sec-Butylbenzene ND Carbon disulfide ND Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotenane ND Chloroform ND Chloromethane ND 0-Chlorotoluene ND 1,2-Dibromo-3-chloropropane Dibromochloromethane ND 1,2-Dichlorobenzene ND 1,3-Dichlorobenzene ND 1,4-Dichlorobenzene ND 1,4-Dichlorotenane ND 1,1-Dichloroethane ND 1,1-Dichloroethene ND trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene ND Trans-1,2-Dichloroethene	Acetone Acrylonitrile Benzene Benzene ND Bromobenzene ND Bromodichloromethane ND Bromoform ND Bromomethane ND 2.0 2-Butanone (MEK) ND ND S.0 N-Butylbenzene ND S.0 sec-Butylbenzene ND S.0 Carbon disulfide ND Carbon tetrachloride ND Chlorobenzene ND Chlorotoromethane ND Chlorotoromethane ND	Acctone         ND         5.0         ug/l           Acrylonitrile         ND         25         ug/l           Benzene         ND         0.50         ug/l           Bromobenzene         ND         5.0         ug/l           Bromodichloromethane         ND         1.0         ug/l           Bromoform         ND         1.0         ug/l           2-Butanone (MEK)         ND         1.0         ug/l           n-Butylbenzene         ND         5.0         ug/l           sec-Butylbenzene         ND         5.0         ug/l           sec-Butylbenzene         ND         5.0         ug/l           Carbon disulfide         ND         5.0         ug/l           Carbon disulfide         ND         1.0         ug/l           Chlorob

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1130883

 Lab Sample ID:
 M85739-7
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	1.2	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

93%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1130883

 Lab Sample ID:
 M85739-7
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



## **Report of Analysis**

Client Sample ID: 1130883

Lab Sample ID: M85739-7 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC31838.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

**Initial Volume Final Volume** Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.222 0.080 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 71% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



## **Report of Analysis**

Client Sample ID: 1130883

Lab Sample ID: M85739-7 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70237.D 1 09/18/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	92%		30-1	50%
877-09-8	Tetrachloro-m-xylene	97%		30-1	50%
2051-24-3	Decachlorobiphenyl	69%		30-1	50%

73%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1130883UF

Lab Sample ID:M85739-8Date Sampled:09/10/09Matrix:AQ - Ground WaterDate Received:09/10/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	11.6	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

Client Sample ID: 1130885

 Lab Sample ID:
 M85739-9
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36501.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



## C

## **Report of Analysis**

Client Sample ID: 1130885

 Lab Sample ID:
 M85739-9
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 93% 70-130%

 $ND = \ Not \ detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1130885

 Lab Sample ID:
 M85739-9
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	96%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



## **Report of Analysis**

Client Sample ID: 1130885

Lab Sample ID: M85739-9 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC31840.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

**Initial Volume Final Volume** Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 71% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



## **Report of Analysis**

Client Sample ID: 1130885

Lab Sample ID: M85739-9 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70238.D 1 09/18/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248	ND ND ND ND	0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l
11097-69-1 11096-82-5 37324-23-5 11100-14-4	Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268	ND ND ND ND	0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	73% 84% 75% 79%		30-150% 30-150% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130885UF

Lab Sample ID:M85739-10Date Sampled:09/10/09Matrix:AQ - Ground WaterDate Received:09/10/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

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Client Sample ID: 1130886

 Lab Sample ID:
 M85739-11
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36502.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1130886 Lab Sample ID: M85739-11

Matrix: AQ - Ground Water
Method: SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

**Date Sampled:** 09/10/09 **Date Received:** 09/10/09 **Percent Solids:** n/a

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits

92%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1130886

 Lab Sample ID:
 M85739-11
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1130886

 Lab Sample ID:
 M85739-11
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 CT-ETPH 7/06
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC31844.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 80% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130886

Lab Sample ID: M85739-11 **Date Sampled:** 09/10/09 Matrix: AQ - Ground Water **Date Received:** 09/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF70239.D 1 09/18/09 CZ09/16/09 OP19488 GEF3230

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
877-09-8	Tetrachloro-m-xylene	77%		30-15	50%
877-09-8	Tetrachloro-m-xylene	88%		30-15	50%
2051-24-3	Decachlorobiphenyl	81%		30-15	50%
2051-24-3	Decachlorobiphenyl	85%		30-15	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1130886UF

Lab Sample ID:M85739-12Date Sampled:09/10/09Matrix:AQ - Ground WaterDate Received:09/10/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

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Client Sample ID: 1130887

 Lab Sample ID:
 M85739-13
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Run #1 N36503.D DF Analyzed By Prep Date Prep Batch Analytical Batch N26503.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1130887 Lab Sample ID: M85739-13

Matrix: AQ - Ground Water Method: SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

**Date Sampled:** 09/10/09 **Date Received:** 09/10/09 **Percent Solids:** n/a

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 91% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1130887

 Lab Sample ID:
 M85739-13
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	92%		70-130%
460-00-4	4-Bromofluorobenzene	94%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130887

 Lab Sample ID:
 M85739-13
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC31846.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 78% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130887

 Lab Sample ID:
 M85739-13
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF70240.D 1 09/18/09 CZ 09/16/09 OP19488 GEF3230

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248	ND ND ND ND ND	0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l
11097-69-1 11096-82-5 37324-23-5 11100-14-4	Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268	ND ND ND ND	0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	90%		30-150%
877-09-8 2051-24-3	Tetrachloro-m-xylene Decachlorobiphenyl	88% 71%		30-150% 30-150%
2051-24-3	Decachlorobiphenyl	74%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130887UF

Lab Sample ID: M85739-14 **Date Sampled:** 09/10/09 Matrix: **Date Received:** 09/10/09 AQ - Ground Water Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	1	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953 (2) Instrument QC Batch: MA10962 (3) Prep QC Batch: MP14096 (4) Prep QC Batch: MP14104

Client Sample ID: 1130888

 Lab Sample ID:
 M85739-15
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36504.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 2 of 3

Client Sample ID: 1130888

Lab Sample ID: M85739-15 **Date Sampled:** 09/10/09 Matrix: **Date Received:** 09/10/09 AQ - Ground Water Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 92% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1130888

 Lab Sample ID:
 M85739-15
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	91%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130888

 Lab Sample ID:
 M85739-15
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 CT-ETPH 7/06
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC31848.D 1 09/17/09 WZ 09/15/09 OP19479 GBC1671

Run #2

Initial Volume Final Volume
Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.548 0.086 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 79% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130888

 Lab Sample ID:
 M85739-15
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF70241.D 1 09/18/09 CZ 09/16/09 OP19488 GEF3230

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND ND ND ND ND ND	0.25 0.25 0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l ug/l
37324-23-5 11100-14-4	Aroclor 1262 Aroclor 1268	ND ND	0.25 0.25	ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	83% 80% 65% 66%		30-150% 30-150% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130888UF

Lab Sample ID:M85739-16Date Sampled:09/10/09Matrix:AQ - Ground WaterDate Received:09/10/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

Page 1 of 3

Client Sample ID: 1130889

 Lab Sample ID:
 M85739-17
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N36505.D 1 09/16/09 WC n/a n/a MSN1361

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

**#** 56.0



Page 2 of 3

Client Sample ID: 1130889 Lab Sample ID: M85739-17 Matrix: AQ - Ground Water

Method: SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

**Date Sampled:** 09/10/09 **Date Received:** 09/10/09 Percent Solids: n/a

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	5
1969 52 7	Dibromoflyoromothono	020/		70 120	10/-

1868-53-7 Dibromofluoromethane 93% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1130889

 Lab Sample ID:
 M85739-17
 Date Sampled:
 09/10/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	95%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound





Misc. Forms

Custody Documents and Other Forms

### Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



# **Parameter Certification Exceptions**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



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M85739: Chain of Custody
Page 1 of 3



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M85739: Chain of Custody

Page 2 of 3



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SAMPLE #	FIELD ID / POINT	OF COLLECT	ON	DATE	TIME	SAMPLED BY:	MATRIX	BOTTLES HCI	HOH K	12SO4	W	コく	1	10					LAB USE ONLY
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M85739: Chain of Custody

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### **Reasonable Confidence Protocol Laboratory Analysis** QA/QC Certification Form

**Laboratory Name: Accutest New England** Client: Loureiro Eng. Associates

**Project Location: Project Number:** UTC: 2009 Quarterly GW-Willow Pond 88UT907

Sampling Date(s): 9/10/2009

Methods:

M85739-1, M85739-2, M85739-3, M85739-4, M85739-5, M85739-6, M85739-7, M85739-Laboratory Sample ID(s):

8, M85739-9, M85739-10, M85739-11, M85739-12, M85739-13, M85739-14, M85739-15,

No 🔽

No 🗔

Yes 🗀

Yes 🔽

M85739-16, M85739-17

CT-ETPH 7/06, SW846 6010B, SW846 7470A, 8082, 8260B

For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any Yes 🔽 criteria falling outside of acceptable guidelines, as specified in the CTDEP method-No 🗀 1 specific Reasonable Confidence Protocol documents)? Yes 🗹 1A Where all the method specified preservation and holding time requirements met? No Yes 🗔 1B No VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods) NA 🔽 Were all samples received by the laboratory in a condition consistent with Yes 🔽 No 🗔 that described on the associated chain-of-custody document(s)? Yes 🔽 3 Were samples received at an appropriate temperature (<6° C)? Were all QA/QC performance criteria specified in the CTDEP Reasonable Yes 🗀 No 🔽 4 Confidence Protocol documents achieved? Yes 🔽 a) Were reporting limits specified or referenced on the chain-of-custody? No ~ b) Were these reporting limits met? No

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belie
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

6

7

data set?

Signature: Position: Lab Director

For each analytical method referenced in this laboratory report package,

were results reported for all constituents identified in the method-specific

analyte lists presented in the Reasonable Confidence Protocol documents? Are project-specific matrix spikes and laboratory duplicates included in this

Printed Name: Reza Tand Date: 9/22/2009

Accutest New England



# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

Job No: M85739

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M85739-1 1130878	Collected: 10-SEP-09 0	9:30 By: RZ	Receiv	ed: 10-SEP-	09 By:	JB
M85739-1	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 00:44 17-SEP-09 02:22 17-SEP-09 22:15	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-2 1130878UF	Collected: 10-SEP-09 0	9:30 By: RZ	Receiv	red: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:12 16-SEP-09 16:47		15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M85739-3 1130881	Collected: 10-SEP-09 1	1:40 By: RZ	Receiv	red: 10-SEP-	09 By:	JB
M85739-3	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 01:12 17-SEP-09 03:01 17-SEP-09 22:59	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-4 1130881UF	Collected: 10-SEP-09 1	1:40 By: RZ	Receiv	red: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:17 16-SEP-09 17:13	MA PY	15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M85739-5 1130882	Collected: 10-SEP-09 1	3:05 By: RZ	Receiv	red: 10-SEP-	09 By:	JB
M85739-5	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 01:41 17-SEP-09 03:41 17-SEP-09 23:28	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-6 1130882UF	Collected: 10-SEP-09 1	3:05 By: RZ	Receiv	ed: 10-SEP-	09 By:	JB
M85739-6	SW846 7470A	15-SEP-09 13:19	MA	15-SEP-09	MA	HG



Job No:

M85739

# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M85739-6	SW846 6010B	16-SEP-09 17:17	PY	14-SEP-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,S, ZN
M85739-7 1130883	Collected: 10-SEP-09	14:45 By: RZ	Receiv	ved: 10-SEP-	09 By:	JB
M85739-7	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 02:09 17-SEP-09 04:20 18-SEP-09 00:42	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-8 1130883UF	Collected: 10-SEP-09	14:45 By: RZ	Receiv	ved: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:21 16-SEP-09 17:22		15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SI ZN
M85739-9 1130885	Collected: 10-SEP-09	09:24 By: HG	Receiv	ved: 10-SEP-	09 By:	JB
M85739-9	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 02:38 17-SEP-09 05:00 18-SEP-09 01:27	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-10 1130885UF	Collected: 10-SEP-09	09:24 By: HG	Receiv	ved: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:28 16-SEP-09 17:26	MA PY	15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SI ZN
M85739-11 1130886	Collected: 10-SEP-09	10:56 By: HG	Receiv	ved: 10-SEP-	09 By:	JB
M85739-11	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 03:06 17-SEP-09 06:19 18-SEP-09 01:56	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP



# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

Job No: M85739 UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M85739-12 1130886UF	Collected: 10-SEP-09	10:56 By: HG	Receiv	red: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:31 16-SEP-09 17:31		15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M85739-13 1130887	Collected: 10-SEP-09	13:11 By: HG	Receiv	red: 10-SEP-	09 By:	JB
M85739-13	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 03:35 17-SEP-09 06:58 18-SEP-09 02:41	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-14 1130887UF	Collected: 10-SEP-09	13:11 By: HG	Receiv	red: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:33 16-SEP-09 17:35		15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M85739-15 1130888	Collected: 10-SEP-09	15:14 By: HG	Receiv	red: 10-SEP-	09 By:	JB
M85739-15	SW846 8260B CT-ETPH 7/06 SW846 8082	16-SEP-09 04:03 17-SEP-09 07:38 18-SEP-09 03:10	WC WZ CZ	15-SEP-09 16-SEP-09		V8260RCP BCTTPH P8082RCP
M85739-16 1130888UF	Collected: 10-SEP-09	15:14 By: HG	Receiv	red: 10-SEP-	09 By:	JB
	SW846 7470A SW846 6010B	15-SEP-09 13:35 16-SEP-09 17:39	MA PY	15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M85739-17 1130889	Collected: 10-SEP-09	14:00 By: HG	Receiv	red: 10-SEP-	09 By:	JB
M85739-17	SW846 8260B	16-SEP-09 04:32	WC			V8260RCP





# GC/MS Volatiles

# QC Data Summaries

# Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



# **Method Blank Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1361-MB	N36485.D	1	09/15/09	WC	n/a	n/a	MSN1361

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



# **Method Blank Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSN1361-MB	N36485.D	1	09/15/09	WC	n/a	n/a	MSN1361

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



# **Method Blank Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample File ID DF Analyzed By Prep Date Prep Batch Analytical Bath MSN1361-MB N36485.D 1 09/15/09 WC n/a n/a MSN1361
----------------------------------------------------------------------------------------------------------------------

The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
	Dibromofluoromethane	90%	70-130%
2037-26-5	Toluene-D8	93%	70-130%
460-00-4	4-Bromofluorobenzene	98%	70-130%



# **Blank Spike Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
MSN1361-BS	N36482A.D	1	09/15/09	WC	n/a	n/a	MSN1361

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	50	42.9	86	70-130
107-13-1	Acrylonitrile	250	215	86	70-130
71-43-2	Benzene	50	46.8	94	70-130
108-86-1	Bromobenzene	50	60.4	121	70-130
75-27-4	Bromodichloromethane	50	49.2	98	70-130
75-25-2	Bromoform	50	49.1	98	70-130
74-83-9	Bromomethane	50	44.5	89	70-130
78-93-3	2-Butanone (MEK)	50	46.6	93	70-130
104-51-8	n-Butylbenzene	50	57.5	115	70-130
135-98-8	sec-Butylbenzene	50	60.6	121	70-130
98-06-6	tert-Butylbenzene	50	63.2	126	70-130
75-15-0	Carbon disulfide	50	43.9	88	70-130
56-23-5	Carbon tetrachloride	50	50.7	101	70-130
108-90-7	Chlorobenzene	50	53.3	107	70-130
75-00-3	Chloroethane	50	42.7	85	70-130
67-66-3	Chloroform	50	41.8	84	70-130
74-87-3	Chloromethane	50	50.3	101	70-130
95-49-8	o-Chlorotoluene	50	61.3	123	70-130
106-43-4	p-Chlorotoluene	50	59.5	119	70-130
96-12-8	1,2-Dibromo-3-chloropropane	50	56.5	113	70-130
124-48-1	Dibromochloromethane	50	58.9	118	70-130
106-93-4	1,2-Dibromoethane	50	54.1	108	70-130
95-50-1	1,2-Dichlorobenzene	50	58.8	118	70-130
541-73-1	1,3-Dichlorobenzene	50	56.7	113	70-130
106-46-7	1,4-Dichlorobenzene	50	62.3	125	70-130
75-71-8	Dichlorodifluoromethane	50	59.3	119	70-130
75-34-3	1,1-Dichloroethane	50	43.9	88	70-130
107-06-2	1,2-Dichloroethane	50	47.8	96	70-130
75-35-4	1,1-Dichloroethene	50	42.4	85	70-130
156-59-2	cis-1,2-Dichloroethene	50	42.5	85	70-130
156-60-5	trans-1,2-Dichloroethene	50	41.1	82	70-130
78-87-5	1,2-Dichloropropane	50	49.0	98	70-130
142-28-9	1,3-Dichloropropane	50	54.6	109	70-130
594-20-7	2,2-Dichloropropane	50	43.2	86	70-130
563-58-6	1,1-Dichloropropene	50	48.9	98	70-130
10061-01-5	cis-1,3-Dichloropropene	50	46.4	93	70-130



# **Blank Spike Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	<b>Analytical Batch</b>
MSN1361-BS	N36482A.D	1	09/15/09	WC	n/a	n/a	MSN1361

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
10061-02-6	trans-1,3-Dichloropropene	50	48.5	97	70-130
100-41-4	Ethylbenzene	50	55.4	111	70-130
76-13-1	Freon 113	50	46.1	92	70-130
87-68-3	Hexachlorobutadiene	50	61.9	124	70-130
591-78-6	2-Hexanone	50	60.8	122	70-130
98-82-8	Isopropylbenzene	50	72.7	145* a	70-130
99-87-6	p-Isopropyltoluene	50	61.3	123	70-130
1634-04-4	Methyl Tert Butyl Ether	50	44.8	90	70-130
108-10-1	4-Methyl-2-pentanone (MIBK)	50	47.4	95	70-130
74-95-3	Methylene bromide	50	46.9	94	70-130
75-09-2	Methylene chloride	50	42.5	85	70-130
91-20-3	Naphthalene	50	61.0	122	70-130
103-65-1	n-Propylbenzene	50	61.5	123	70-130
100-42-5	Styrene	50	53.7	107	70-130
630-20-6	1,1,1,2-Tetrachloroethane	50	56.3	113	70-130
79-34-5	1,1,2,2-Tetrachloroethane	50	61.4	123	70-130
127-18-4	Tetrachloroethene	50	53.5	107	70-130
109-99-9	Tetrahydrofuran	50	42.8	86	70-130
108-88-3	Toluene	50	47.7	95	70-130
110-57-6	Trans-1,4-Dichloro-2-Butene	50	51.9	104	70-130
87-61-6	1,2,3-Trichlorobenzene	50	58.1	116	70-130
120-82-1	1,2,4-Trichlorobenzene	50	59.9	120	70-130
71-55-6	1,1,1-Trichloroethane	50	43.6	87	70-130
79-00-5	1,1,2-Trichloroethane	50	47.4	95	70-130
79-01-6	Trichloroethene	50	48.3	97	70-130
75-69-4	Trichlorofluoromethane	50	44.2	88	70-130
96-18-4	1,2,3-Trichloropropane	50	55.8	112	70-130
95-63-6	1,2,4-Trimethylbenzene	50	59.7	119	70-130
108-67-8	1,3,5-Trimethylbenzene	50	62.0	124	70-130
75-01-4	Vinyl chloride	50	53.8	108	70-130
	m,p-Xylene	100	109	109	70-130
95-47-6	o-Xylene	50	56.7	113	70-130



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**Method:** SW846 8260B

# **Blank Spike Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample MSN1361-BS	<b>File ID</b> N36482A.D	<b>DF</b> 1	<b>Analyzed</b> 09/15/09	By WC	<b>Prep Date</b> n/a	Prep Batch n/a	Analytical Batch MSN1361

The QC reported here applies to the following samples:

M85739-1, M85739-3, M85739-5, M85739-7, M85739-9, M85739-11, M85739-13, M85739-15, M85739-17

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
	Dibromofluoromethane	89%	70-130%
	Toluene-D8	96%	70-130%
	4-Bromofluorobenzene	106%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



**Method:** SW846 8260B

### Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85739

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M85748-18MS	N36493.D	5	09/15/09	WC	n/a	n/a	MSN1361
M85748-18MSD	N36494.D	5	09/15/09	WC	n/a	n/a	MSN1361
M85748-18	N36492.D	1	09/15/09	WC	n/a	n/a	MSN1361

The QC reported here applies to the following samples:

 $M85739-1,\ M85739-3,\ M85739-5,\ M85739-7,\ M85739-9,\ M85739-11,\ M85739-13,\ M85739-15,\ M85739-17$ 

CAS No.	Compound	M85748-18 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	155	62* a	157	63* a	1	70-130/30
107-13-1	Acrylonitrile	ND	1250	1110	89	1140	91	3	70-130/30
71-43-2	Benzene	ND	250	232	93	232	93	0	70-130/30
108-86-1	Bromobenzene	ND	250	292	117	304	122	4	70-130/30
75-27-4	Bromodichloromethane	ND	250	251	100	249	100	1	70-130/30
75-25-2	Bromoform	ND	250	258	103	262	105	2	70-130/30
74-83-9	Bromomethane	ND	250	203	81	209	84	3	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	191	76	197	79	3	70-130/30
104-51-8	n-Butylbenzene	ND	250	276	110	297	119	7	70-130/30
135-98-8	sec-Butylbenzene	ND	250	295	118	312	125	6	70-130/30
98-06-6	tert-Butylbenzene	ND	250	308	123	318	127	3	70-130/30
75-15-0	Carbon disulfide	ND	250	220	88	219	88	0	70-130/30
56-23-5	Carbon tetrachloride	ND	250	244	98	247	99	1	70-130/30
108-90-7	Chlorobenzene	ND	250	262	105	266	106	2	70-130/30
75-00-3	Chloroethane	ND	250	216	86	210	84	3	70-130/30
67-66-3	Chloroform	ND	250	210	84	210	84	0	70-130/30
74-87-3	Chloromethane	ND	250	247	99	254	102	3	70-130/30
95-49-8	o-Chlorotoluene	ND	250	303	121	312	125	3	70-130/30
106-43-4	p-Chlorotoluene	ND	250	286	114	298	119	4	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	304	122	311	124	2	70-130/30
124-48-1	Dibromochloromethane	ND	250	300	120	302	121	1	70-130/30
106-93-4	1,2-Dibromoethane	ND	250	284	114	285	114	0	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	293	117	303	121	3	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	278	111	290	116	4	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	302	121	319	128	5	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	285	114	285	114	0	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	219	88	218	87	0	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	240	96	239	96	0	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	210	84	210	84	0	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	208	83	213	85	2	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	202	81	203	81	0	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	247	99	247	99	0	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	286	114	286	114	0	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	200	80	194	78	3	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	236	94	232	93	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND	250	231	92	232	93	0	70-130/30



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**Method:** SW846 8260B

### Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M85748-18MS	N36493.D	5	09/15/09	WC	n/a	n/a	MSN1361
M85748-18MSD	N36494.D	5	09/15/09	WC	n/a	n/a	MSN1361
M85748-18	N36492.D	1	09/15/09	WC	n/a	n/a	MSN1361

The QC reported here applies to the following samples:

CAS No.	Compound	M85748-18 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND	250	245	98	244	98	0	70-130/30
100-41-4	Ethylbenzene	ND	250	272	109	278	111	2	70-130/30
76-13-1	Freon 113	ND	250	221	88	218	87	1	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	292	117	305	122	4	70-130/30
591-78-6	2-Hexanone	ND	250	269	108	292	117	8	70-130/30
98-82-8	Isopropylbenzene	ND	250	357	143* b	369	148* b	3	70-130/30
99-87-6	p-Isopropyltoluene	ND	250	300	120	315	126	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	1.3	250	227	90	229	91	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)		250	253	101	262	105	3	70-130/30
74-95-3	Methylene bromide	ND	250	248	99	245	98	1	70-130/30
75-09-2	Methylene chloride	ND	250	215	86	216	86	0	70-130/30
91-20-3	Naphthalene	ND	250	295	118	322	129	9	70-130/30
103-65-1	n-Propylbenzene	ND	250	294	118	307	123	4	70-130/30
100-42-5	Styrene	ND	250	259	104	270	108	4	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	283	113	292	117	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	334	134* a	337	135* a	1	70-130/30
127-18-4	Tetrachloroethene	ND	250	258	103	262	105	2	70-130/30
109-99-9	Tetrahydrofuran	ND	250	221	88	232	93	5	70-130/30
108-88-3	Toluene	ND	250	235	94	234	94	0	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	250	265	106	276	110	4	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	277	111	298	119	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	291	116	308	123	6	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	217	87	218	87	0	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	247	99	244	98	1	70-130/30
79-01-6	Trichloroethene	ND	250	241	96	240	96	0	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	212	85	214	86	1	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	290	116	304	122	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND	250	299	120	307	123	3	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND	250	309	124	315	126	2	70-130/30
75-01-4	Vinyl chloride	ND	250	277	111	270	108	3	70-130/30
	m,p-Xylene	ND	500	536	107	539	108	1	70-130/30
95-47-6	o-Xylene	ND	250	285	114	287	115	1	70-130/30



# 5.3.1

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**Method:** SW846 8260B

### Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M85748-18MS	N36493.D	5	09/15/09	WC	n/a	n/a	MSN1361
M85748-18MSD	N36494.D	5	09/15/09	WC	n/a	n/a	MSN1361
M85748-18	N36492.D	1	09/15/09	WC	n/a	n/a	MSN1361

#### The QC reported here applies to the following samples:

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M85748-18	Limits
1868-53-7 2037-26-5	Dibromofluoromethane Toluene-D8	92% 97%	89% 97%	91% 93%	70-130% 70-130%
460-00-4	4-Bromofluorobenzene	106%	105%	95%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Blank Spike meets program technical requirements.



### **Volatile Internal Standard Area Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

 Check Std:
 MSN1361-CC1359
 Injection Date:
 09/15/09

 Lab File ID:
 N36482.D
 Injection Time:
 17:36

**Instrument ID:** GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	155299 310598 77650	8.64 9.14 8.14	279872 559744 139936	9.50 10.00 9.00	155727 311454 77864	12.75 13.25 12.25	94595 189190 47298	15.31 15.81 14.81		6.22 6.72 5.72
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN1361-BS MSN1361-MB ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	155299 148315 144836 142293 142943 140677 143148 143643 139993 143145 148971 167042 161340 157220 152169	8.64 8.64 8.64 8.64 8.64 8.64 8.64 8.64	279872 274904 263701 264591 260303 259758 260041 262781 258687 260868 271143 304180 297030 290335 280043	9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50	155727 137553 132376 130778 131254 129152 131041 134495 129210 144845 149721 154274 149172 143635 137585	12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75	82746 83612 82729 89078 90892 104192 97233 93888 89181	15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.31	92844 83698 83070 95857 84902 94742 86622 89409 97821 104724 112373 107707 102158	6.22 6.22 6.22 6.22 6.22 6.22 6.22 6.22
M85739-9 M85739-11 M85739-13 M85739-15 M85739-17	145646 143728 141944 140383 137182	8.64 8.64 8.64 8.64	269762 263230 259592 256656 252582	9.50 9.50 9.50 9.50 9.50	130987 127578 125023 122093 122916	12.75 12.75 12.75 12.75 12.75	83786 81617 79578 80201 80653	15.31 15.31 15.31 15.31 15.31	93993 101154	6.22 6.22 6.22 6.22 6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



### **Volatile Surrogate Recovery Summary**

**Job Number:** M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8260B Matrix: AQ

### Samples and QC shown here apply to the above method

Lab	Lab			
Sample ID	File ID	S1	S2	S3
M85739-1	N36497.D	91.0	94.0	98.0
M85739-3	N36498.D	91.0	92.0	97.0
M85739-5	N36499.D	91.0	92.0	96.0
M85739-7	N36500.D	93.0	93.0	95.0
M85739-9	N36501.D	93.0	92.0	96.0
M85739-11	N36502.D	92.0	92.0	94.0
M85739-13	N36503.D	91.0	92.0	94.0
M85739-15	N36504.D	92.0	91.0	91.0
M85739-17	N36505.D	93.0	93.0	95.0
M85748-18MS	N36493.D	92.0	97.0	106.0
M85748-18MSD	N36494.D	89.0	97.0	105.0
MSN1361-BS	N36482A.D	89.0	96.0	106.0
MSN1361-MB	N36485.D	90.0	93.0	98.0

Surrogate Recovery Compounds Limits

 S1 = Dibromofluoromethane
 70-130%

 S2 = Toluene-D8
 70-130%

 S3 = 4-Bromofluorobenzene
 70-130%





### GC Semi-volatiles

### QC Data Summaries

### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



### **Method Blank Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

	Sample OP19479-MB	File ID BC31802.D	<b>DF</b> 1	<b>Analyzed</b> 09/16/09	By WZ	<b>Prep Date</b> 09/15/09	Prep Batch OP19479	Analytical Batch GBC1671
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The QC reported here applies to the following samples:

**Method:** CT-ETPH 7/06

 $M85739-1,\ M85739-3,\ M85739-5,\ M85739-7,\ M85739-9,\ M85739-11,\ M85739-13,\ M85739-15$ 

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 63% 50-149%



**Method:** SW846 8082

### **Method Blank Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample OP19488-MB	File ID EF70226.D	<b>DF</b> 1	<b>Analyzed</b> 09/17/09	By CZ	<b>Prep Date</b> 09/16/09	Prep Batch OP19488	Analytical Batch GEF3230

### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries		Limits
877-09-8	Tetrachloro-m-xylene	85%	30-150%
877-09-8	Tetrachloro-m-xylene	82%	30-150%
2051-24-3	Decachlorobiphenyl	44%	30-150%
2051-24-3	Decachlorobiphenyl	46%	30-150%



**Method:** CT-ETPH 7/06

### **Blank Spike Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP19479-BS	File ID BC31804.D	<b>DF</b> 1	<b>Analyzed</b> 09/16/09	By WZ	<b>Prep Date</b> 09/15/09	Prep Batch OP19479	Analytical Batch GBC1671

The QC reported here applies to the following samples:

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.451	64	60-120

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
3386-33-2	1-Chlorooctadecane	69%	50-149%



**Method:** SW846 8082

### **Blank Spike Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP19488-BS	File ID EF70227.D	<b>DF</b> 1	<b>Analyzed</b> 09/17/09	By CZ	<b>Prep Date</b> 09/16/09	Prep Batch OP19488	Analytical Batch GEF3230

### The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.3	115	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	2.0	100	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
877-09-8	Tetrachloro-m-xylene	90%	30-150%
877-09-8	Tetrachloro-m-xylene	89%	30-150%
2051-24-3	Decachlorobiphenyl	51%	30-150%
2051-24-3	Decachlorobiphenyl	50%	30-150%



**Method:** CT-ETPH 7/06

### Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP19479-MS	BC31806.D	1	09/16/09	WZ	09/15/09	OP19479	GBC1671
OP19479-MSD	BC31808.D	1	09/16/09	WZ	09/15/09	OP19479	GBC1671
M85833-2	BC31810.D	1	09/16/09	WZ	09/15/09	OP19479	GBC1671

The QC reported here applies to the following samples:

CAS No.	Compound	M85833-2 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.480	69	0.492	70	2	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8:	5833-2	Limits			
3386-33-2	1-Chlorooctadecane	61%	67%	60%	)	50-149%	)		



**Method:** SW846 8082

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP19488-MS	EF70228.D	1	09/17/09	CZ	09/16/09	OP19488	GEF3230
OP19488-MSD	EF70229.D	1	09/17/09	CZ	09/16/09	OP19488	GEF3230
M85833-10	EF70230.D	1	09/17/09	CZ	09/16/09	OP19488	GEF3230

#### The QC reported here applies to the following samples:

CAS No. Compound	M85833-10 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 Aroclor 1016	ND	2	2.2	110	2.1	105	5	40-140/50
11104-28-2 Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 Aroclor 1260	ND	2	2.1	105	1.9	95	10	40-140/50
37324-23-5 Aroclor 1262	ND		ND		ND		nc	40-140/50
11100-14-4 Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M85833-10	Limits
877-09-8	Tetrachloro-m-xylene	82%	73%	80%	30-150%
877-09-8	Tetrachloro-m-xylene	82%	84%	89%	30-150%
2051-24-3	Decachlorobiphenyl	45%	47%	48%	30-150%
2051-24-3	Decachlorobiphenyl	46%	48%	46%	30-150%



### **Semivolatile Surrogate Recovery Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH 7/06 Matrix: AQ

### Samples and QC shown here apply to the above method

Lab	
File ID	S1 a
BC31832.D	70.0
BC31834.D	61.0
BC31836.D	72.0
BC31838.D	71.0
BC31840.D	71.0
BC31844.D	80.0
BC31846.D	78.0
BC31848.D	79.0
BC31804.D	69.0
BC31802.D	63.0
BC31806.D	61.0
BC31808.D	67.0
	File ID  BC31832.D BC31834.D BC31836.D BC31838.D BC31840.D BC31844.D BC31846.D BC31848.D BC31804.D BC31802.D BC31806.D

Surrogate Recovery Limits Compounds

50-149% S1 = 1-Chlorooctadecane

(a) Recovery from GC signal #1



### **Semivolatile Surrogate Recovery Summary**

Job Number: M85739

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8082 Matrix: AQ

### Samples and QC shown here apply to the above method

Lab	Lab				
Sample ID	File ID	S1 a	<b>S1</b> b	<b>S2</b> a	<b>S2</b> b
M85739-1	EF70233.D	76.0	88.0	87.0	86.0
M85739-3	EF70234.D	80.0	94.0	92.0	91.0
M85739-5	EF70235.D	84.0	87.0	83.0	83.0
M85739-7	EF70237.D	92.0	97.0	69.0	73.0
M85739-9	EF70238.D	73.0	84.0	75.0	79.0
M85739-11	EF70239.D	77.0	88.0	81.0	85.0
M85739-13	EF70240.D	90.0	88.0	71.0	74.0
M85739-15	EF70241.D	83.0	80.0	65.0	66.0
OP19488-BS	EF70227.D	90.0	89.0	51.0	50.0
OP19488-MB	EF70226.D	85.0	82.0	44.0	46.0
OP19488-MS	EF70228.D	82.0	82.0	45.0	46.0
OP19488-MSD	EF70229.D	73.0	84.0	47.0	48.0

Surrogate Recovery Compounds Limits

S1 = Tetrachloro-m-xylene 30-150% S2 = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1(b) Recovery from GC signal #2





### Metals Analysis

### QC Data Summaries

### Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

# Login Number: M85739 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

Methods: SW846 6010B

Units: ug/l

QC Batch ID: MP14096 Matrix Type: AQUEOUS

Prep Date: 09/14/09

Prep Date.					09/14/09			
Metal	RL	IDL	MDL	MB raw	final			
Aluminum	200	27	40					
Antimony	6.0	1.4	1.6					
Arsenic	10	1	1.8	-0.30	<10			
Barium	200	.57	1.1	0.50	<200			
Beryllium	4.0	.15	. 4					
Boron	100	.65	2.3					
Cadmium	4.0	.24	1.9	0.10	<4.0			
Calcium	5000	7.6	15					
Chromium	10	.81	1.1	-0.30	<10			
Cobalt	50	. 25	.3					
Copper	25	2.2	4	0.80	<25			
Gold	50	1.1	4.2					
Iron	100	3.7	13					
Lead	5.0	1.1	2.7	0.70	<5.0			
Magnesium	5000	37	77					
Manganese	15	.12	1.1					
Molybdenum	100	.22	.8					
Nickel	40	.24	1.3	0.20	<40			
Palladium	50	2.2	4					
Platinum	50	9.3	13					
Potassium	5000	39	46					
Selenium	10	1.9	3.5	1.1	<10			
Silicon	100	8.9	36					
Silver	5.0	.54	1.3	0.10	<5.0			
Sodium	5000	61	160					
Strontium	10	. 24	.3					
Thallium	10	1.2	1.3					
Tin	100	.65	1.3					
Titanium	50	.74	.8					
Tungsten	100	5.6	8					
Vanadium	30	.68	1.6					
Zinc	20	.74	1.5	1.1	<20			

Associated samples MP14096: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14, M85739-16

90 of 100
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#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AOUEOUS Units: ug/l

Matrix Type:	Matrix Type: AQUEOUS					Units: ug/l							
Prep Date:				09/14/09				09/14/09					
Metal	M85739-2 Original		Spikelot MPICP	% Rec	QC Limits	M85739-2 Original		RPD	QC Limits				
Aluminum	anr												
Antimony													
Arsenic	0.0	539	500	107.8	75-125	0.0	0.0	NC	0-20				
Barium	118	2200	2000	104.1	75-125	118	117	0.9	0-20				
Beryllium													
Boron	anr												
Cadmium	0.30	543	500	108.5	75-125	0.30	0.30	0.0	0-20				
Calcium													
Chromium	0.0	506	500	101.2	75-125	0.0	0.0	NC	0-20				
Cobalt	anr												
Copper	0.0	521	500	104.2	75-125	0.0	0.0	NC	0-20				
Gold													
Iron	anr												
Lead	0.0	1000	1000	100.0	75-125	0.0	0.0	NC	0-20				
Magnesium	anr												
Manganese	anr												
Molybdenum	anr												
Nickel	2.0	502	500	100.0	75-125	2.0	1.9	5.1	0-20				
Palladium													
Platinum													
Potassium													
Selenium	0.0	550	500	110.0	75-125	0.0	0.0	NC	0-20				
Silicon													
Silver	0.0	213	200	106.5	75-125	0.0	0.0	NC	0-20				
Sodium													
Strontium													
Thallium													
Tin	anr												
Titanium	anr												
Tungsten													
Vanadium													
Zinc	16.8	537	500	104.0	75-125	16.8	15.9	5.5	0-20				

Associated samples MP14096: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14, M85739-16



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:			09/14/09					09/14/09	
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum	anr								
Antimony									
Arsenic	520	500	104.0	80-120	518	500	103.6	0.4	20
Barium	2030	2000	101.5	80-120	2010	2000	100.5	1.0	20
Beryllium									
Boron	anr								
Cadmium	526	500	105.2	80-120	513	500	102.6	2.5	20
Calcium									
Chromium	497	500	99.4	80-120	488	500	97.6	1.8	20
Cobalt	anr								
Copper	505	500	101.0	80-120	494	500	98.8	2.2	20
Gold									
Iron	anr								
Lead	1000	1000	100.0	80-120	994	1000	99.4	0.6	20
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	496	500	99.2	80-120	493	500	98.6	0.6	20
Palladium									
Platinum									
Potassium									
Selenium	533	500	106.6	80-120	524	500	104.8	1.7	20
Silicon									
Silver	206	200	103.0	80-120	203	200	101.5	1.5	20
Sodium									
Strontium									
Thallium									
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium									
Zinc	517	500	103.4	80-120	505	500	101.0	2.3	20

Associated samples MP14096: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14, M85739-16



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

#### SERIAL DILUTION RESULTS SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/14/09

rrep bace.			05/11/05	
Metal	M85739-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	118	119	1.1	0-10
Beryllium				
Boron	anr			
Cadmium	0.300	0.00	100.0(a)	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt	anr			
Copper	0.00	0.00	NC	0-10
Gold				
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	2.00	2.70	35.0 (a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin	anr			
Titanium	anr			
Tungsten				
Vanadium				
Zinc	16.8	18.6	10.7 (a)	0-10

Associated samples MP14096: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14, M85739-16



#### SERIAL DILUTION RESULTS SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample  $\,$  concentration (< 50 times IDL).

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M85739

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/15/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.035	.048	0.023	<0.20

Associated samples MP14104: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14, M85739-16

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85739 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

09/15/09 09/15/09 Prep Date:

Metal	M85739- Origina		Spikelo HGRWS1	t % Rec	QC Limits	M85739 Origina		RPD	QC Limits	
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20	

Associated samples MP14104: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14,

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85739
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units:  $\mbox{ug/l}$ 

Prep Date: 09/15/09 09/15/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.9	3	96.7	0.0	20

Associated samples MP14104: M85739-2, M85739-4, M85739-6, M85739-8, M85739-10, M85739-12, M85739-14, M85739-16

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested







09/25/09



### **Technical Report for**

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M85761

Sampling Date: 09/11/09

### Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin McKinney

Total number of pages in report: 112





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579) NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

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Lab Director

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## Sample Summary

Job No:

M85761

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample	Collected			Matr		Client
Number	Date	Time By	Received	Code	Туре	Sample ID
M85761-1	09/11/09	12:40 RZ	09/11/09	AQ	Ground Water	1130891
M85761-2	09/11/09	12:40 RZ	09/11/09	AQ	Ground Water	1130891UF
M85761-3	09/11/09	10:25 RZ	09/11/09	AQ	Ground Water	1130890
M85761-4	09/11/09	10:25 HG	09/11/09	AQ	Ground Water	1130890UF
M85761-5	09/11/09	13:21 HG	09/11/09	AQ	Ground Water	1130897
M85761-6	09/11/09	13:21 HG	09/11/09	AQ	Ground Water	1130897UF
M85761-7	09/11/09	10:29 HG	09/11/09	AQ	Ground Water	1130895
M85761-8	09/11/09	13:00 HG	09/11/09	AQ	Ground Water	1130949
M85761-9	09/11/09	14:52 HG	09/11/09	AQ	Ground Water	1130950
M85761-10	09/11/09	14:52 HG	09/11/09	AQ	Ground Water	1130950UF
M85761-11	09/11/09	14:10 HG	09/11/09	AQ	Ground Water	1130894
M85761-12	09/11/09	14:00 HG	09/11/09	AQ	Ground Water	1130893
M85761-13	09/11/09	14:00 HG	09/11/09	AQ	Ground Water	1130893UF





# Sample Summary (continued)

Job No:

M85761

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
M85761-14	09/11/09	14:40 RZ	09/11/09	AQ	Ground Water	1130892
M85761-15	09/11/09	14:40 RZ	09/11/09	AΩ	Ground Water	1130892UF
1100101 10	00/11/00	11.10102	00/11/00		Orouna Water	110000201
M85761-16	09/11/09	10:29 HG	09/11/09	AQ	Ground Water	1130895UF
M85761-17	09/11/09	10:29 HG	09/11/09	AQ	Ground Water	1130896
M85761-18	09/11/09	10:29 HG	09/11/09	AO	Ground Water	1130896UF





#### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M85761

Site: UTC: 2009 Quarterly GW-Willow Pond Report Date 9/25/2009 4:22:32 PM

18 Sample(s) were collected on 09/11/2009 and were received at Accutest on 09/11/2009 properly preserved, at 2 Deg. C and intact. These Samples received an Accutest job number of M85761. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

#### Volatiles by GCMS By Method SW846 8260B

Matrix AO Batch ID: MSN1366

- All samples were analyzed within the recommended method holding time.
- Sample(s) M85768-2MS, M85768-2MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- BS/BSD Recovery(s) for several compounds are outside control limits. Blank Spike meets program technical requirements.
- MS/MSD Recovery(s) for several compounds are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- M85768-2MS/MSD for Isopropylbenzene: Outside control limits. Blank Spike meets program technical requirements.
- Continuing calibration check standard for acetone exceed 30% Difference. This check standard met RCP criteria.
- Initial calibration standard MSN1359-ICC1359 for 2,2-dichloropropane are employed quadratic regression
   Initial calibration verification standard MSN1359-ICV1359 for dichlorodifluoromethane exceed 35% Difference.

Matrix AQ Batch ID: MST488

- All samples were analyzed within the recommended method holding time.
- Sample(s) M85861-12MS, M85861-12MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- BS/BSD Recovery(s) for 1,2,3-Trichlorobenzene, Acetone, Naphthalene are outside control limits. Blank Spike meets program technical requirements.
- MS/MSD Recovery(s) for 1,2-Dichloropropane are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- MS/MSD Recovery(s) for cis-1,2-Dichloroethene, Tetrachloroethene, Trichloroethene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Continuing calibration check standard for acetone, 2-butanone, 2-hexanone exceed 30% Difference. This check standard met RCP criteria.
- Initial calibration standard MST487-ICC487 for chloromethane is employed quadratic regression.

#### Extractables by GC By Method CT-ETPH 7/06

Matrix AO Batch ID: OP19489

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85833-11MS, M85833-11MSD were used as the QC samples indicated.



#### Extractables by GC By Method SW846 8082

Matrix AQ Batch ID: OP19488

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M85833-10MS, M85833-10MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Metals By Method SW846 6010B

Matrix AQ Batch ID: MP14096

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85739-2DUP, M85739-2MS, M85739-2SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Cadmium, Nickel, Zinc are outside control limits for sample MP14096-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).
- Only selected metals requested.

#### Metals By Method SW846 7470A

Matrix AQ Batch ID: MP14104

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M85739-2DUP, M85739-2MS were used as the QC samples for metals.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M85761).





## Sample Results

Report of Analysis



### Report of Analysis

Client Sample ID: 1130891

Lab Sample ID:M85761-1Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 N36602.D 1 09/18/09 WC n/a n/a MSN1366

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	0.51	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.2	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	29.1	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	14.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.1	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



### Report of Analysis

Client Sample ID: 1130891

Lab Sample ID:M85761-1Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	5.8	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	2.8	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	3.2	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	6.6	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	32.0	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	93%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B \,=\, Indicates \; analyte \; found \; in \; associated \; method \; blank \;$ 

N = Indicates presumptive evidence of a compound



### C

### Report of Analysis

Client Sample ID: 1130891

Lab Sample ID:M85761-1Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	93%		70-130%
460-00-4	4-Bromofluorobenzene	93%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Report of Analysis

Client Sample ID: 1130891

Lab Sample ID: M85761-1 Date Sampled: 09/11/09

Matrix: AQ - Ground Water Date Received: 09/11/09

Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 BC32048.D 1 09/23/09 KD 09/16/09 OP19489 GBC1678

Run #2

Initial Volume Final Volume Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.997 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 63% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130891

Lab Sample ID: M85761-1 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

File ID Prep Date Prep Batch Analytical Batch DF Analyzed By EF70242.D 09/16/09 OP19488 GEF3230 Run #1 1 09/18/09 CZ

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
877-09-8	Tetrachloro-m-xylene	74%		30-1	50%
877-09-8	Tetrachloro-m-xylene	<b>79</b> %		30-1	50%
2051-24-3	Decachlorobiphenyl	54%		30-1	50%
2051-24-3	Decachlorobiphenyl	56%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Client Sample ID: 1130891UF

Lab Sample ID: M85761-2 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Project: Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	14.7	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	1090	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

# Report of Analysis

Client Sample ID: 1130890

Lab Sample ID:M85761-3Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 N36603.D 1 09/18/09 WC n/a n/a MSN1366

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130890

Lab Sample ID:M85761-3Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-01-3	trans-1,3-Dichloropropene	ND	0.50	ug/l	
10001-02-0	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND ND	5.0	ug/1 ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND ND	1.0		
1034-04-4 108-10-1			5.0	ug/l	
	4-Methyl-2-pentanone (MIBK)	ND ND		ug/l	
74-95-3	Methylene bromide		5.0	ug/l	
75-09-2	Methylene chloride	ND ND	2.0	ug/l	
91-20-3	Naphthalene	ND ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
1868-53-7	Dibromofluoromethane	91%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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Client Sample ID: 1130890

Lab Sample ID: M85761-3 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

#### **VOA RCP List**

Surrogate Recoveries CAS No. Run#1 Run#2 Limits

2037-26-5 Toluene-D8 92% 70-130% 460-00-4 4-Bromofluorobenzene 88% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130890

Lab Sample ID: M85761-3 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

File ID DF Prep Date Prep Batch Analytical Batch Analyzed By BC32050.D 09/23/09 09/16/09 OP19489 **GBC1678** Run #1 1 KD

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.126 0.080mg/l

CAS No. Surrogate Recoveries Run#1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 50-149% 61%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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# Report of Analysis

Client Sample ID: 1130890

Lab Sample ID: M85761-3 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

File ID Prep Date Prep Batch Analytical Batch DF Analyzed By EF70243.D 09/16/09 OP19488 GEF3230 Run #1 1 09/18/09 CZ

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q	
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
877-09-8	Tetrachloro-m-xylene	77%		30-150%	6
877-09-8	Tetrachloro-m-xylene	<b>79</b> %		30-150%	6
2051-24-3	Decachlorobiphenyl	<b>72</b> %		30-150%	6
2051-24-3	Decachlorobiphenyl	73%		30-1509	6

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1130890UF

Lab Sample ID: M85761-4 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Project: Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.7	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

Client Sample ID: 1130897

Lab Sample ID:M85761-5Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 N36604.D 1 09/18/09 WC n/a n/a MSN1366

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	31.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	1.3	1.0	ug/l	
75-35-4	1,1-Dichloroethene	22.0	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	99.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	6.3	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

 $ND\,=\,Not\;detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B \,=\, Indicates \,\, analyte \,\, found \,\, in \,\, associated \,\, method \,\, blank$ 



Client Sample ID: 1130897

Lab Sample ID:M85761-5Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	10.7	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	75.7	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	93%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B \,=\, Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



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# Report of Analysis

Client Sample ID: 1130897

Lab Sample ID: M85761-5 Date Sampled: 09/11/09 AQ - Ground Water Matrix: Date Received: 09/11/09 Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

2037-26-5 Toluene-D8 70-130% 90% 460-00-4 4-Bromofluorobenzene 70-130% 89%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# Report of Analysis

Client Sample ID: 1130897

Lab Sample ID: M85761-5 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

File ID DF Prep Date Prep Batch Analytical Batch Analyzed By BC32052.D 09/23/09 09/16/09 OP19489 **GBC1678** Run #1 1 KD

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.118 0.080mg/l

CAS No. Surrogate Recoveries Run#1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 72% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# Report of Analysis

Client Sample ID: 1130897

 Lab Sample ID:
 M85761-5
 Date Sampled:
 09/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 EF70244.D 1 09/18/09 CZ 09/16/09 OP19488 GEF3230

Run #2

Initial Volume Final Volume
Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262	ND ND ND ND ND ND ND	0.25 0.25 0.25 0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l ug/l ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8	Tetrachloro-m-xylene Tetrachloro-m-xylene	91% 93%		30-150% 30-150%
2051-24-3	Decachlorobiphenyl	85%		30-150%
2051-24-3	Decachlorobiphenyl	90%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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Client Sample ID: 1130897UF

Lab Sample ID: M85761-6 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	344	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

Client Sample ID: 1130895

Lab Sample ID:M85761-7Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 N36605.D 1 09/18/09 WC n/a n/a MSN1366

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	0.54	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	7.3	1.0	ug/l	
107-06-2	1,2-Dichloroethane	2.1	1.0	ug/l	
75-35-4	1,1-Dichloroethene	32.2	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	38.4	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	1.9	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

 $ND\,=\,Not\;detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B \,=\, Indicates \,\, analyte \,\, found \,\, in \,\, associated \,\, method \,\, blank$ 



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# Report of Analysis

Client Sample ID: 1130895

Lab Sample ID:M85761-7Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound Result RL		RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	22.3	1.0	ug/l	
109-99-9	Tetrahydrofuran	58.9	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	7.2	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	162	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	19.8	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	90%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 3 of 3

# Report of Analysis

Client Sample ID: 1130895

Lab Sample ID: M85761-7 Date Sampled: 09/11/09 Matrix: Date Received: 09/11/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

2037-26-5 Toluene-D8 91% 70-130% 460-00-4 4-Bromofluorobenzene 70-130% 89%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130895

Lab Sample ID: M85761-7 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

File ID DF Prep Date Prep Batch Analytical Batch Analyzed By BC32054.D 09/23/09 09/16/09 OP19489 **GBC1678** Run #1 1 KD

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.202 0.080mg/l

CAS No. Surrogate Recoveries Run#1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 50-149% 74%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

# Report of Analysis

Client Sample ID: 1130895

Lab Sample ID:M85761-7Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8082SW846 3510CPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 EF70245.D 1 09/18/09 CZ 09/16/09 OP19488 GEF3230

Run #2

Initial Volume Final Volume

Run #1 950 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q	
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
877-09-8	Tetrachloro-m-xylene	91%		30-150%	
877-09-8	Tetrachloro-m-xylene	103%		30-150%	
2051-24-3	Decachlorobiphenyl	83%		30-150%	
2051-24-3	Decachlorobiphenyl	85%		30-150%	

ND = Not detected

RL = Reporting Limit

**E** = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130949

Lab Sample ID:M85761-8Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 T13828.D 1 09/19/09 AT n/a n/a MST488

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

 $ND\,=\,Not\;detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130949

Lab Sample ID:M85761-8Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound Result R		RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
1868-53-7	Dibromofluoromethane	98%		70-1	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# C

# Report of Analysis

Client Sample ID: 1130949

Lab Sample ID:M85761-8Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	99%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130950

Lab Sample ID:M85761-9Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 T13829.D 1 09/19/09 AT n/a n/a MST488

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	7.6	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

 $ND\,=\,Not\;detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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# Report of Analysis

Client Sample ID: 1130950

Lab Sample ID: M85761-9 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

#### **VOA RCP List**

CAS No.	Compound Result RL U		Units	Q	
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
1868-53-7	Dibromofluoromethane	101%		70-1	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



70-130%

Client Sample ID: 1130950

Lab Sample ID:M85761-9Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

100%

Project: UTC: 2009 Quarterly GW-Willow Pond

4-Bromofluorobenzene

#### **VOA RCP List**

460-00-4

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	99%		70-130%

 $ND \,=\, Not\; detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# Report of Analysis

Client Sample ID: 1130950

Lab Sample ID: M85761-9 Date Sampled: 09/11/09
Matrix: AQ - Ground Water Date Received: 09/11/09
Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 BC32056.D 1 09/23/09 KD 09/16/09 OP19489 GBC1678

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 59% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



# Report of Analysis

Client Sample ID: 1130950

Lab Sample ID:M85761-9Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8082SW846 3510CPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 EF70246.D 1 09/18/09 CZ 09/16/09 OP19488 GEF3230

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	81%		30-150%
877-09-8	Tetrachloro-m-xylene	96%		30-150%
2051-24-3	Decachlorobiphenyl	<b>59</b> %		30-150%
2051-24-3	Decachlorobiphenyl	64%		30-150%

ND = Not detected

RL = Reporting Limit

**E** = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

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Client Sample ID: 1130950UF

Lab Sample ID: M85761-10 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953 (2) Instrument QC Batch: MA10962 (3) Prep QC Batch: MP14096 (4) Prep QC Batch: MP14104

Page 1 of 1

Client Sample ID: 1130894

Lab Sample ID: M85761-11 Date Sampled: 09/11/09
Matrix: AQ - Ground Water Date Received: 09/11/09
Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 BC32058.D 1 09/23/09 KD 09/16/09 OP19489 GBC1678

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.287 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 70% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130893

Lab Sample ID:M85761-12Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 T13830.D 1 09/19/09 AT n/a n/a MST488

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	131	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	31.7	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

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Client Sample ID: 1130893

Lab Sample ID:M85761-12Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	39.6	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	31.4	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	163	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	102%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B \,=\, Indicates \,\, analyte \,\, found \,\, in \,\, associated \,\, method \,\, blank$ 



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Client Sample ID: 1130893

Lab Sample ID:M85761-12Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

 2037-26-5
 Toluene-D8
 98%
 70-130%

 460-00-4
 4-Bromofluorobenzene
 102%
 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1130893

 Lab Sample ID:
 M85761-12
 Date Sampled:
 09/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 EF70250.D 1 09/18/09 SL 09/16/09 OP19488 GEF3231

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q	
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254	ND ND ND ND 0.96 ND	0.25 0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l ug/l	
11096-82-5 37324-23-5 11100-14-4	Aroclor 1260 Aroclor 1262 Aroclor 1268	ND ND ND	0.25 0.25 0.25	ug/l ug/l ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	80% 88% 76% 80%		30-150% 30-150% 30-150% 30-150%	,

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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Client Sample ID: 1130893UF

Lab Sample ID: M85761-13 Date Sampled: 09/11/09
Matrix: AQ - Ground Water Date Received: 09/11/09
Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.4	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	408	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	101	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	203	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	41.0	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	605	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	31.6	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

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Client Sample ID: 1130892

Lab Sample ID:M85761-14Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 T13831.D 1 09/19/09 AT n/a n/a MST488

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	1.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1130892

Lab Sample ID:M85761-14Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	1.8	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	1.4	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
1868-53-7	Dibromofluoromethane	100%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Client Sample ID: 1130892

Lab Sample ID:M85761-14Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

 2037-26-5
 Toluene-D8
 92%
 70-130%

 460-00-4
 4-Bromofluorobenzene
 99%
 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

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Client Sample ID: 1130892

Lab Sample ID: M85761-14 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond Project:

File ID DF Prep Date Prep Batch Analytical Batch Analyzed By BC32060.D 09/23/09 09/16/09 OP19489 **GBC1678** Run #1 1 KD

Run #2

Initial Volume Final Volume 1.0 ml

Run #1 1000 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.08080.080mg/l

CAS No. Surrogate Recoveries Run#1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 62% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Client Sample ID: 1130892

Lab Sample ID:M85761-14Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8082SW846 3510CPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 EF70251.D 1 09/18/09 SL 09/16/09 OP19488 GEF3231

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	82%		30-150%
877-09-8	Tetrachloro-m-xylene	98%		30-150%
2051-24-3	Decachlorobiphenyl	95%		30-150%
2051-24-3	Decachlorobiphenyl	99%		30-150%

ND = Not detected

RL = Reporting Limit

**E** = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Client Sample ID: 1130892UF

Lab Sample ID: M85761-15 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	4.8	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	243	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

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Client Sample ID: 1130895UF

Lab Sample ID: M85761-16 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.1	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	309	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	54.0	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104

#### Page 1 of 3

### Report of Analysis

Client Sample ID: 1130896

Lab Sample ID:M85761-17Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 T13832.D 10 09/19/09 AT n/a n/a MST488

Run #2

Purge Volume

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	50	ug/l	
107-13-1	Acrylonitrile	ND	250	ug/l	
71-43-2	Benzene	ND	5.0	ug/l	
108-86-1	Bromobenzene	ND	50	ug/l	
75-27-4	Bromodichloromethane	ND	10	ug/l	
75-25-2	Bromoform	ND	10	ug/l	
74-83-9	Bromomethane	ND	20	ug/l	
78-93-3	2-Butanone (MEK)	ND	50	ug/l	
104-51-8	n-Butylbenzene	ND	50	ug/l	
135-98-8	sec-Butylbenzene	ND	50	ug/l	
98-06-6	tert-Butylbenzene	ND	50	ug/l	
75-15-0	Carbon disulfide	ND	50	ug/l	
56-23-5	Carbon tetrachloride	ND	10	ug/l	
108-90-7	Chlorobenzene	ND	10	ug/l	
75-00-3	Chloroethane	ND	20	ug/l	
67-66-3	Chloroform	ND	10	ug/l	
74-87-3	Chloromethane	ND	20	ug/l	
95-49-8	o-Chlorotoluene	ND	50	ug/l	
106-43-4	p-Chlorotoluene	ND	50	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	50	ug/l	
124-48-1	Dibromochloromethane	ND	10	ug/l	
106-93-4	1,2-Dibromoethane	ND	20	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	10	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	10	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	10	ug/l	
75-71-8	Dichlorodifluoromethane	ND	20	ug/l	
75-34-3	1,1-Dichloroethane	ND	10	ug/l	
107-06-2	1,2-Dichloroethane	ND	10	ug/l	
75-35-4	1,1-Dichloroethene	35.5	10	ug/l	
156-59-2	cis-1,2-Dichloroethene	48.7	10	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	10	ug/l	
78-87-5	1,2-Dichloropropane	ND	20	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 2 of 3

Client Sample ID: 1130896

Lab Sample ID:M85761-17Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	50	ug/l	
594-20-7	2,2-Dichloropropane	ND	50	ug/l	
563-58-6	1,1-Dichloropropene	ND	50	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	ug/l	
100-41-4	Ethylbenzene	ND	10	ug/l	
76-13-1	Freon 113	ND	50	ug/l	
87-68-3	Hexachlorobutadiene	ND	50	ug/l	
591-78-6	2-Hexanone	ND	50	ug/l	
98-82-8	Isopropylbenzene	ND	50	ug/l	
99-87-6	p-Isopropyltoluene	ND	50	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	10	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)		50	ug/l	
74-95-3	Methylene bromide	ND	50	ug/l	
75-09-2	Methylene chloride	ND	20	ug/l	
91-20-3	Naphthalene	ND	50	ug/l	
103-65-1	n-Propylbenzene	ND	50	ug/l	
100-42-5	Styrene	ND	50	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	50	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	10	ug/l	
127-18-4	Tetrachloroethene	19.6	10	ug/l	
109-99-9	Tetrahydrofuran	ND	100	ug/l	
108-88-3	Toluene	ND	10	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	50	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	50	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	50	ug/l	
71-55-6	1,1,1-Trichloroethane	12.0	10	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	10	ug/l	
79-01-6	Trichloroethene	194	10	ug/l	
75-69-4	Trichlorofluoromethane	ND	10	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	50	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	50	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	50	ug/l	
75-01-4	Vinyl chloride	17.2	10	ug/l	
	m,p-Xylene	ND	10	ug/l	
95-47-6	o-Xylene	ND	10	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
1868-53-7	Dibromofluoromethane	99%		70-13	30%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1130896

Lab Sample ID:M85761-17Date Sampled:09/11/09Matrix:AQ - Ground WaterDate Received:09/11/09Method:SW846 8260BPercent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

 2037-26-5
 Toluene-D8
 100%
 70-130%

 460-00-4
 4-Bromofluorobenzene
 99%
 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1130896

Lab Sample ID: M85761-17 Date Sampled: 09/11/09
Matrix: AQ - Ground Water Date Received: 09/11/09
Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 BC32062.D 1 09/23/09 KD 09/16/09 OP19489 GBC1678

Run #2

Initial Volume Final Volume

Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.219 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 75% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130896

 Lab Sample ID:
 M85761-17
 Date Sampled:
 09/11/09

 Matrix:
 AQ - Ground Water
 Date Received:
 09/11/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch Run #1 EF70252.D 1 09/18/09 SL 09/16/09 OP19488 GEF3231

Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	88%		30-150%
877-09-8	Tetrachloro-m-xylene	91%		30-150%
2051-24-3	Decachlorobiphenyl	69%		30-150%
2051-24-3	Decachlorobiphenyl	71%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1130896UF

Lab Sample ID: M85761-18 Date Sampled: 09/11/09 Matrix: AQ - Ground Water Date Received: 09/11/09

Percent Solids: n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### Total Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.6	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	343	200	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	09/15/09	09/15/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	54.8	40	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	09/14/09	09/16/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA10953(2) Instrument QC Batch: MA10962(3) Prep QC Batch: MP14096(4) Prep QC Batch: MP14104



Misc. Forms

# **Custody Documents and Other Forms**

### Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



# Parameter Certification Exceptions

Job Number:

M85761 LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond Project:

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



MM Zaccutest. //	CHAIN 495 TECHNOL	OF CUSTO OGY CENTER WEST - BUILDING	DY		n 85761
ELABORATORIES OF	5 TEL:50	IARLBOROUGH, MA 01752 8-481-6200 • FAX: 508-481-7753		ACCUTEST QUOTE #:	163
CLIENT INFORMATION		LITY INFORMATION		ANALYTICAL INFORMATION	MATRIX CODES
LOUPLIE ENGINEERA HISTORIQ  MANE WOLLANDER DIVE  ADDRESS  CITY ON MCKINNING  SEND REPORT TO 0 - 410 - 3000	PROJECT NAME FUN	ney, East Hartford		Jeth smetal	DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
ACCUTEST SAMPLE # FIELD ID / POINT OF COLLECTION		SAMPLED BA: BESERVALL BAR SERVER BA: BESERVALL BAR SERVER BA: BESERVALL BAR SERVER BA: BESERVALL BAR SERVER BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BESERVALL BA: BE		53	LAB USE ONLY
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14 DAY TURNAROUND HARDCOPY, EMERGENCY OR RUSH IS	O OTHER (CRECIEV	7	repor	Y	
DATA UNLESS PREVIOUSLY APPROVED  SAMPLE CUSTODY MU	T BE DOCUMENTED BEYOW	EACH TIME SAMPLES CHANGE PO	SSESION, INCL	UDING COURIER DELIVERY	1
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REWNQUISHED BY: DATE TIME: REG		RELINQUISHED BY:	DATE TIME:	RECEIVED BY:	
3. RELINQUISHED BY: DATE TIME: REC	EIVED BY:	4.	PRESERVE	4. EWHERE APPLICABLE O	IN ICE TEMPERATURE
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M85761: Chain of Custody
Page 1 of 3



ACCUTEST. 2 0 F	3 495 TECHNOLOG MAF TEL: 508-4	OF CUSTO SY CENTER WEST * BUILDING BLBOROUGH, MA 01752 181-6200 * FAX: 508-481-7753	ONE	ACCUTEST JOB #: M \$5	3
CLIENT INFORMATION  LOWIC'TO FING INCOMING ACCOLLATES  NAME NOTHWEST WITH COLOUP  CITY, COLIN MC CANALY  SEND REPORT TO: PLUT-10-3000  ACCUTEST	PROJECT NAME POST TO THE PROJECT NO.  FAX#  COLLECTION	YINFORMATION  YINFORMATION  YINFORMATION  COULT HOWELE	7,808	ANALYTICAL INFORMATION	DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID
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#### Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form

Laboratory Name: Accutest New England Client: Loureiro Eng. Associates

Project Location: Project Number: UTC: 2009 Quarterly GW-Willow Pond 88UT907

Sampling Date(s): 9/11/2009

data set?

Methods:

M85761-1, M85761-2, M85761-3, M85761-4, M85761-5, M85761-6, M85761-7, M85761-Laboratory Sample ID(s):

8, M85761-9, M85761-10, M85761-11, M85761-12, M85761-13, M85761-14, M85761-15,

Yes 🔽

No 🗔

M85761-16, M85761-17, M85761-18

CT-ETPH 7/06, SW846 6010B, SW846 7470A, SW846 8082, 8260B

For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any Yes 🗹 No 🗀 criteria falling outside of acceptable guidelines, as specified in the CTDEP methodspecific Reasonable Confidence Protocol documents)? Yes 🗹 1A Where all the method specified preservation and holding time requirements met? No Yes 🗀 1B No VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods) NA 🔽 Were all samples received by the laboratory in a condition consistent with Yes 🔽 2 No 🗀 that described on the associated chain-of-custody document(s)? Yes 🗹 Were samples received at an appropriate temperature (<6° C)? 3 Nο Were all QA/QC performance criteria specified in the CTDEP Reasonable ~ Yes 🗀 No Confidence Protocol documents achieved? Yes 🔽 5 a) Were reporting limits specified or referenced on the chain-of-custody? Nο Yes 🗀 굣 b) Were these reporting limits met? No For each analytical method referenced in this laboratory report package, Yes 🗀 No 🗹 6 were results reported for all constituents identified in the method-specific

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

analyte lists presented in the Reasonable Confidence Protocol documents? Are project-specific matrix spikes and laboratory duplicates included in this

l, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belie
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

Position: Lab Director Signature:

Printed Name: Reza Tand Date: 9/25/2009 Accutest New England

M85761

Job No:

# Internal Sample Tracking Chronicle

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	<b>A</b>		Ву	Prepped	Ву	Test Codes		
M85761-1 1130891	Collected: 11-SEP-09 12:40 By: RZ			ved: 11-SEP-	09 By:	SAP		
M85761-1	SW846 8082 SW846 8260B CT-ETPH 7/06	18-SEP-09 03:55 18-SEP-09 19:57 23-SEP-09 07:11	CZ 16-SEP-09 FG WC KD 16-SEP-09 AJ			P8082RCP V8260RCP BCTTPH		
M85761-2 1130891UF		12:40 By: RZ	Receiv	/ed: 11-SEP-	09 By:	SAP		
	SW846 7470A SW846 6010B	15-SEP-09 13:37 16-SEP-09 17:43	MA PY	15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN		
M85761-3 1130890	Collected: 11-SEP-09	10:25 By: RZ	Received: 11-SEP-09 By: SAP					
M85761-3	SW846 8082 SW846 8260B CT-ETPH 7/06	18-SEP-09 04:24 18-SEP-09 20:26 23-SEP-09 07:50	CZ WC KD	16-SEP-09 16-SEP-09		P8082RCP V8260RCP BCTTPH		
M85761-4 1130890UF		10:25 By: HG	Received: 11-SEP-09 By: SAP					
	SW846 7470A SW846 6010B	15-SEP-09 13:40 16-SEP-09 17:57	MA PY	15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN		
M85761-5 1130897	Collected: 11-SEP-09	13:21 By: HG	Receiv	/ed: 11-SEP-	09 By:	SAP		
	SW846 8082 SW846 8260B CT-ETPH 7/06	18-SEP-09 05:08 18-SEP-09 20:54 23-SEP-09 08:30	CZ WC KD	16-SEP-09 16-SEP-09		P8082RCP V8260RCP BCTTPH		
M85761-6 1130897UF				Received: 11-SEP-09 By: SAP				
M85761-6	SW846 7470A	15-SEP-09 13:42	MA	15-SEP-09	MA	HG		



# Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M85761 Job No:

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample						T G. 1		
Number	Method	Analyzed	Ву	Prepped	By	Test Codes		
M85761-6	SW846 6010B	16-SEP-09 18:01	PY	14-SEP-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,S ZN		
M85761-7 1130895	Collected: 11-SEP-09	10:29 By: HG	Receiv	ved: 11-SEP-	09 By:	SAP		
M85761-7	SW846 8082 SW846 8260B CT-ETPH 7/06	18-SEP-09 05:38 18-SEP-09 21:23 23-SEP-09 09:09	CZ WC KD	16-SEP-09 16-SEP-09		P8082RCP V8260RCP BCTTPH		
M85761-8 1130949	Collected: 11-SEP-09	13:00 By: HG	Receiv	ved: 11-SEP-	09 By:	SAP		
M85761-8	SW846 8260B	19-SEP-09 16:27	AT			V8260RCP		
M85761-9 1130950	Collected: 11-SEP-09 14:52 By: HG			ved: 11-SEP-	09 By:	SAP		
M85761-9	SW846 8082 SW846 8260B CT-ETPH 7/06	18-SEP-09 06:22 19-SEP-09 16:54 23-SEP-09 09:48	CZ AT KD	16-SEP-09 16-SEP-09		P8082RCP V8260RCP BCTTPH		
M85761-10 1130950UF	Collected: 11-SEP-09	14:52 By: HG	Receiv	ved: 11-SEP-	09 By:	SAP		
	SW846 7470A SW846 6010B	15-SEP-09 13:45 16-SEP-09 18:06	MA PY	15-SEP-09 14-SEP-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN		
M85761-11 1130894	Collected: 11-SEP-09	14:10 By: HG	Receiv	ved: 11-SEP-	09 By:	SAP		
M85761-11	CT-ETPH 7/06	23-SEP-09 10:28	KD	16-SEP-09	AJ	ВСТТРН		
M85761-12 1130893	2 Collected: 11-SEP-09 14:00 By: HG			ved: 11-SEP-	09 By:	SAP		
	SW846 8082 SW846 8260B	18-SEP-09 09:32 19-SEP-09 17:20	SL AT	16-SEP-09	FG	P8082RCP V8260RCP		



M85761

Job No:

# Internal Sample Tracking Chronicle

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes

M85761-13 1130893UF	Collected: 11-SEP-09	14:00 By: HG	Receiv	ved: 11-SEP-	09 By:	SAP
	SW846 7470A SW846 6010B					HG AG,AS,BA,CD,CR,CU,NI,PB, ZN
M85761-14 1130892	Collected: 11-SEP-09	14:40 By: RZ	Receiv	ved: 11-SEP-	09 By:	SAP
M85761-14	SW846 8082 SW846 8260B CT-ETPH 7/06	19-SEP-09 17:47		16-SEP-09 16-SEP-09		V8260RCP
M85761-15 1130892UF	Collected: 11-SEP-09	14:40 By: RZ	Receiv	ed: 11-SEP-	09 By:	SAP
	SW846 7470A SW846 6010B					HG AG,AS,BA,CD,CR,CU,NI,PB, ZN
M85761-16 1130895UF	Collected: 11-SEP-09	10:29 By: HG	Receiv	ed: 11-SEP-	09 By:	SAP
	SW846 7470A SW846 6010B					HG AG,AS,BA,CD,CR,CU,NI,PB, ZN

					ZIV
M85761-17 Collected: 11-SEP-09 11130896	Received: 11-SEP-09 By: SAP				
M85761-17 SW846 8082 M85761-17 SW846 8260B M85761-17 CT-ETPH 7/06	18-SEP-09 10:46 19-SEP-09 18:14 23-SEP-09 11:46	AT	16-SEP-09 16-SEP-09		P8082RCP V8260RCP BCTTPH
M85761-18 Collected: 11-SEP-09 1130896UF	10:29 By: HG	Receiv	ved: 11-SEP-	09 By:	SAP





# Internal Sample Tracking Chronicle

Loureiro Eng. Associates

M85761 Job No: UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M85761-18	SW846 6010B	16-SEP-09 18:23	PY	14-SEP-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,SE ZN



# **GC/MS Volatiles**

# **QC Data Summaries**

### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



Method: SW846 8260B

Method Blank Summary
Job Number: M85761
Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample File ID DF Analyzed By MSN1366-MB N36584A.D 1 09/18/09 WG	Prep Date Prep Batch Analytical Batch n/a n/a MSN1366
------------------------------------------------------------------	-------------------------------------------------------

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method: SW846 8260B

Method Blank Summary
Job Number: M85761
Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample MSN1366-MB	File ID N36584A.D	DF 1	Analyzed 09/18/09	By WC	Prep Date n/a	Prep Batch n/a	Analytical Batch MSN1366

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



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Method: SW846 8260B

Job Number:

460-00-4

Method Blank Summary

M85761 LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample MSN1366-MB	File ID N36584A.D	DF 1	Analyzed 09/18/09	By WC	Prep Date n/a	Prep Batch n/a	Analytical Batch MSN1366

70-130%

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

4-Bromofluorobenzene

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	91%	70-130%
2037-26-5	Toluene-D8	92%	70-130%

95%



Method: SW846 8260B

# Method Blank Summary Job Number: M85761 Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample MST488-MB	File ID T13824.D	DF 1	Analyzed 09/19/09	By AT	Prep Date n/a	Prep Batch n/a	Analytical Batch MST488

The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



Method: SW846 8260B

Method Blank Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample MST488-MB	File ID T13824.D	DF 1	Analyzed 09/19/09	By AT	Prep Date n/a	Prep Batch n/a	Analytical Batch MST488

The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



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Method: SW846 8260B

### Method Blank Summary

Job Number:

M85761 LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample	File ID	DF	Analyzed 09/19/09	By	Prep Date	Prep Batch	Analytical Batch
MST488-MB	T13824.D	1		AT	n/a	n/a	MST488

The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Surrogate Recoveries		Limits
1000 52 7	D:h	0.40/	70 120

70-130% 1868-53-7 Dibromofluoromethane 94% 70-130% 2037-26-5 Toluene-D8 98% 460-00-4 4-Bromofluorobenzene 99% 70-130%



Method: SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample MSN1366-BS MSN1366-BSD	File ID N36581A.D N36582A.D	_	Analyzed 09/18/09 09/18/09	By WC WC	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch MSN1366 MSN1366
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The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

		Spike	BSP	BSP	BSD	BSD		Limits
CAS No.	Compound	ug/l	ug/l	%	ug/l	%	RPD	Rec/RPD
67-64-1	Acetone	50	37.2	74	38.6	77	4	70-130/25
107-13-1	Acrylonitrile	250	206	82	213	85	3	70-130/25
71-43-2	Benzene	50	43.9	88	45.3	91	3	70-130/25
108-86-1	Bromobenzene	50	59.4	119	60.2	120	1	70-130/25
75-27-4	Bromodichloromethane	50	46.4	93	48.2	96	4	70-130/25
75-25-2	Bromoform	50	49.9	100	50.8	102	2	70-130/25
74-83-9	Bromomethane	50	38.3	77	40.7	81	6	70-130/25
78-93-3	2-Butanone (MEK)	50	43.6	87	42.7	85	2	70-130/25
104-51-8	n-Butylbenzene	50	57.3	115	59.5	119	4	70-130/25
135-98-8	sec-Butylbenzene	50	60.3	121	61.9	124	3	70-130/25
98-06-6	tert-Butylbenzene	50	62.7	125	64.6	129	3	70-130/25
75-15-0	Carbon disulfide	50	40.1	80	40.9	82	2	70-130/25
56-23-5	Carbon tetrachloride	50	48.0	96	48.6	97	1	70-130/25
108-90-7	Chlorobenzene	50	51.0	102	52.3	105	3	70-130/25
75-00-3	Chloroethane	50	38.7	77	40.3	81	4	70-130/25
67-66-3	Chloroform	50	39.3	79	40.6	81	3	70-130/25
74-87-3	Chloromethane	50	40.9	82	43.9	88	7	70-130/25
95-49-8	o-Chlorotoluene	50	61.2	122	63.7	127	4	70-130/25
106-43-4	p-Chlorotoluene	50	58.0	116	59.5	119	3	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	62.2	124	65.5	131* a	5	70-130/25
124-48-1	Dibromochloromethane	50	58.2	116	59.8	120	3	70-130/25
106-93-4	1,2-Dibromoethane	50	54.5	109	55.4	111	2	70-130/25
95-50-1	1,2-Dichlorobenzene	<b>50</b>	58.6	117	61.3	123	5	70-130/25
541-73-1	1,3-Dichlorobenzene	<b>50</b>	56.7	113	57.7	115	2	70-130/25
106-46-7	1,4-Dichlorobenzene	50	59.7	119	62.0	124	4	70-130/25
75-71-8	Dichlorodifluoromethane	50	46.4	93	47.8	96	3	70-130/25
75-34-3	1,1-Dichloroethane	<b>50</b>	40.6	81	42.2	84	4	70-130/25
107-06-2	1,2-Dichloroethane	50	46.1	92	46.9	94	2	70-130/25
75-35-4	1,1-Dichloroethene	50	39.2	78	40.1	80	2	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	40.1	80	41.7	83	4	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	38.8	78	40.3	81	4	70-130/25
78-87-5	1,2-Dichloropropane	50	45.9	92	47.2	94	3	70-130/25
142-28-9	1,3-Dichloropropane	50	53.6	107	54.5	109	2	70-130/25
594-20-7	2,2-Dichloropropane	50	40.7	81	42.0	84	3	70-130/25
563-58-6	1,1-Dichloropropene	50	45.4	91	47.0	94	3	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	44.8	90	46.5	93	4	70-130/25



Method: SW846 8260B

### Blank Spike/Blank Spike Duplicate Summary

Job Number: M85761

LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample MSN1366-BS MSN1366-BSD	File ID N36581A.D N36582A.D	_	Analyzed 09/18/09 09/18/09	By WC WC	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch MSN1366 MSN1366
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The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

		Spike	BSP	BSP	BSD	BSD		Limits
CAS No.	Compound	ug/l	ug/l	%	ug/l	%	RPD	Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	47.0	94	49.2	98	5	70-130/25
100-41-4	Ethylbenzene	50	52.7	105	53.7	107	2	70-130/25
76-13-1	Freon 113	50	42.0	84	42.6	85	1	70-130/25
87-68-3	Hexachlorobutadiene	50	61.9	124	62.7	125	1	70-130/25
591-78-6	2-Hexanone	50	56.9	114	57.3	115	1	70-130/25
98-82-8	Isopropylbenzene	50	73.3	147* a	76.3	153* a	4	70-130/25
99-87-6	p-Isopropyltoluene	50	60.8	122	63.2	126	4	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	43.6	87	45.1	90	3	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	46.9	94	48.5	97	3	70-130/25
74-95-3	Methylene bromide	50	46.3	93	47.6	95	3	70-130/25
75-09-2	Methylene chloride	50	40.2	80	41.3	83	3	70-130/25
91-20-3	Naphthalene	50	66.9	134* a	68.8	138* a	3	70-130/25
103-65-1	n-Propylbenzene	50	59.3	119	61.4	123	3	70-130/25
100-42-5	Styrene	50	49.3	99	50.0	100	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	55.2	110	55.8	112	1	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	65.5	131* a	67.8	136* a	3	70-130/25
127-18-4	Tetrachloroethene	50	50.9	102	51.3	103	1	70-130/25
109-99-9	Tetrahydrofuran	50	42.4	85	43.2	86	2	70-130/25
108-88-3	Toluene	50	45.8	92	46.8	94	2	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	49.6	99	52.8	106	6	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	60.9	122	62.3	125	2	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	62.3	125	65.3	131* a	5	70-130/25
71-55-6	1,1,1-Trichloroethane	50	41.4	83	42.4	85	2	70-130/25
79-00-5	1,1,2-Trichloroethane	50	45.9	92	46.6	93	2	70-130/25
79-01-6	Trichloroethene	50	45.5	91	47.1	94	3	70-130/25
75-69-4	Trichlorofluoromethane	50	39.4	79	40.7	81	3	70-130/25
96-18-4	1,2,3-Trichloropropane	50	60.1	120	61.6	123	2	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	60.7	121	62.8	126	3	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	63.1	126	65.2	130	3	70-130/25
75-01-4	Vinyl chloride	50	47.3	95	49.2	98	4	70-130/25
	m,p-Xylene	100	103	103	105	105	2	70-130/25
95-47-6	o-Xylene	50	54.0	108	55.1	110	2	70-130/25



# 5.2.1

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Method: SW846 8260B

### Blank Spike/Blank Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

MSN1366-BS N36581A.D 1 09/18/09 WC n/a n/a MSN1366 MSN1366-BSD N36582A.D 1 09/18/09 WC n/a n/a MSN1366			_				,	
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The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	Dibromofluoromethane	89%	91%	70-130%
2037-26-5	Toluene-D8	96%	97%	70-130%
460-00-4	4-Bromofluorobenzene	110%	111%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



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Method: SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MST488-BS	T13821.D	1	09/19/09	ΑT	n/a	n/a	MST488
MST488-BSD	T13822.D	1	09/19/09	AT	n/a	n/a	MST488

The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

CACNo	Compound	Spike	BSP	BSP	BSD	BSD	RPD	Limits
CAS No.	Compound	ug/l	ug/l	%	ug/l	%	KPD	Rec/RPD
67-64-1	Acetone	50	79.7	159* a	74.5	149* a	7	70-130/25
107-13-1	Acrylonitrile	250	240	96	240	96	0	70-130/25
71-43-2	Benzene	50	55.2	110	52.9	106	4	70-130/25
108-86-1	Bromobenzene	50	57.8	116	54.8	110	5	70-130/25
75-27-4	Bromodichloromethane	50	50.9	102	49.3	99	3	70-130/25
75-25-2	Bromoform	<b>50</b>	50.8	102	49.1	98	3	70-130/25
74-83-9	Bromomethane	<b>50</b>	49.6	99	46.1	92	7	70-130/25
78-93-3	2-Butanone (MEK)	<b>50</b>	55.7	111	55.6	111	0	70-130/25
104-51-8	n-Butylbenzene	50	60.7	121	56.5	113	7	70-130/25
135-98-8	sec-Butylbenzene	<b>50</b>	60.5	121	56.5	113	7	70-130/25
98-06-6	tert-Butylbenzene	50	59.5	119	56.0	112	6	70-130/25
75-15-0	Carbon disulfide	50	56.6	113	52.4	105	8	70-130/25
56-23-5	Carbon tetrachloride	50	51.8	104	50.2	100	3	70-130/25
108-90-7	Chlorobenzene	50	58.4	117	55.6	111	5	70-130/25
75-00-3	Chloroethane	50	52.9	106	50.4	101	5	70-130/25
67-66-3	Chloroform	50	51.1	102	47.9	96	6	70-130/25
74-87-3	Chloromethane	50	50.3	101	45.4	91	10	70-130/25
95-49-8	o-Chlorotoluene	50	58.3	117	54.2	108	7	70-130/25
106-43-4	p-Chlorotoluene	50	59.2	118	54.9	110	8	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	47.5	95	46.3	93	3	70-130/25
124-48-1	Dibromochloromethane	50	57.7	115	55.3	111	4	70-130/25
106-93-4	1,2-Dibromoethane	50	57.1	114	55.5	111	3	70-130/25
95-50-1	1,2-Dichlorobenzene	50	57.4	115	53.6	107	7	70-130/25
541-73-1	1,3-Dichlorobenzene	50	57.9	116	54.0	108	7	70-130/25
106-46-7	1,4-Dichlorobenzene	50	56.9	114	53.4	107	6	70-130/25
75-71-8	Dichlorodifluoromethane	<b>50</b>	51.9	104	49.8	100	4	70-130/25
75-34-3	1,1-Dichloroethane	50	52.7	105	48.9	98	7	70-130/25
107-06-2	1,2-Dichloroethane	50	47.2	94	45.6	91	3	70-130/25
75-35-4	1,1-Dichloroethene	50	56.6	113	52.6	105	7	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	56.9	114	53.1	106	7	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	54.8	110	51.0	102	7	70-130/25
78-87-5	1,2-Dichloropropane	<b>50</b>	53.5	107	51.1	102	5	70-130/25
142-28-9	1,3-Dichloropropane	<b>50</b>	53.9	108	51.6	103	4	70-130/25
594-20-7	2,2-Dichloropropane	<b>50</b>	57.9	116	54.5	109	6	70-130/25
563-58-6	1,1-Dichloropropene	<b>50</b>	56.2	112	54.6	109	3	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	58.0	116	56.2	112	3	70-130/25



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Method: SW846 8260B

### Blank Spike/Blank Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

MST488-BS T1	ile ID	0:	9/19/09 A	ÁŤ 1	n/a	n/a	Analytical Batch MST488 MST488
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The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

		Spike	BSP	BSP	BSD	BSD		Limits
CAS No.	Compound	ug/l	ug/l	%	ug/l	%	RPD	Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	57.1	114	55.3	111	3	70-130/25
100-41-4	Ethylbenzene	50	61.8	124	58.5	117	5	70-130/25
76-13-1	Freon 113	50	54.0	108	52.5	105	3	70-130/25
87-68-3	Hexachlorobutadiene	50	56.5	113	54.0	108	5	70-130/25
591-78-6	2-Hexanone	50	59.2	118	56.0	112	6	70-130/25
98-82-8	Isopropylbenzene	50	61.6	123	57.3	115	7	70-130/25
99-87-6	p-Isopropyltoluene	50	60.0	120	56.4	113	6	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	53.7	107	51.3	103	5	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	49.0	98	46.2	92	6	70-130/25
74-95-3	Methylene bromide	50	50.7	101	49.1	98	3	70-130/25
75-09-2	Methylene chloride	50	53.6	107	50.2	100	7	70-130/25
91-20-3	Naphthalene	50	74.3	149* a	66.0	132* a	12	70-130/25
103-65-1	n-Propylbenzene	50	61.0	122	57.0	114	7	70-130/25
100-42-5	Styrene	50	59.8	120	57.1	114	5	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	57.3	115	54.4	109	5	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	53.4	107	50.6	101	5	70-130/25
127-18-4	Tetrachloroethene	50	61.9	124	58.8	118	5	70-130/25
109-99-9	Tetrahydrofuran	50	47.2	94	47.7	95	1	70-130/25
108-88-3	Toluene	50	55.6	111	53.1	106	5	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	53.5	107	50.4	101	6	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	79.0	158* a	68.3	137* a	15	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	62.0	124	55.5	111	11	70-130/25
71-55-6	1,1,1-Trichloroethane	50	51.4	103	48.6	97	6	70-130/25
79-00-5	1,1,2-Trichloroethane	50	51.3	103	50.4	101	2	70-130/25
79-01-6	Trichloroethene	50	55.0	110	52.6	105	4	70-130/25
75-69-4	Trichlorofluoromethane	50	50.9	102	48.2	96	5	70-130/25
96-18-4	1,2,3-Trichloropropane	50	53.8	108	50.6	101	6	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	60.4	121	56.4	113	7	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	60.2	120	55.8	112	8	70-130/25
75-01-4	Vinyl chloride	50	51.5	103	47.6	95	8	70-130/25
	m,p-Xylene	100	127	127	121	121	5	70-130/25
95-47-6	o-Xylene	50	58.4	117	55.0	110	6	70-130/25



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Method: SW846 8260B

# C

### Blank Spike/Blank Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample         File ID         D           MST488-BS         T13821.D         1           MST488-BSD         T13822.D         1	OF Analyzed 1 09/19/09 1 09/19/09	AT 1	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch MST488 MST488
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The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
	Dibromofluoromethane	95%	93%	70-130%
	Toluene-D8	98%	99%	70-130%
	4-Bromofluorobenzene	97%	95%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



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Method: SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

CAS No.	Compound	M8576		Spike ug/l	MS	MS %	MSD	MSD %	RPD	Limits Rec/RPD
CAS No.	Compound	ug/1	Q	ug/1	ug/l	70	ug/l	70	KPD	Kec/KPD
67-64-1	Acetone	ND		250	146	58* a	142	57* a	3	70-130/30
107-13-1	Acrylonitrile	ND		1250	1020	82	1020	82	0	70-130/30
71-43-2	Benzene	ND		250	222	89	223	89	0	70-130/30
108-86-1	Bromobenzene	ND		250	272	109	287	115	5	70-130/30
75-27-4	Bromodichloromethane	ND		250	230	92	238	95	3	70-130/30
75-25-2	Bromoform	ND		250	232	93	240	96	3	70-130/30
74-83-9	Bromomethane	ND		250	142	57* a	187	<b>75</b>	27	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	185	74	187	<b>75</b>	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	269	108	283	113	5	70-130/30
135-98-8	sec-Butylbenzene	ND		250	279	112	292	117	5	70-130/30
98-06-6	tert-Butylbenzene	ND		250	294	118	307	123	4	70-130/30
75-15-0	Carbon disulfide	ND		250	212	85	213	85	0	70-130/30
56-23-5	Carbon tetrachloride	ND		250	204	82	207	83	1	70-130/30
108-90-7	Chlorobenzene	ND		250	245	98	250	100	2	70-130/30
75-00-3	Chloroethane	ND		250	203	81	204	82	0	70-130/30
67-66-3	Chloroform	ND		250	200	80	200	80	0	70-130/30
74-87-3	Chloromethane	ND		250	250	100	245	98	2	70-130/30
95-49-8	o-Chlorotoluene	ND		250	282	113	297	119	5	70-130/30
106-43-4	p-Chlorotoluene	ND		250	270	108	285	114	5	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND		250	277	111	290	116	5	70-130/30
124-48-1	Dibromochloromethane	ND		250	269	108	275	110	2	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	251	100	254	102	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	275	110	287	115	4	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	263	105	279	112	6	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	280	112	302	121	8	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	256	102	261	104	2	70-130/30
75-34-3	1,1-Dichloroethane	1.4		250	213	85	214	85	0	70-130/30
107-06-2	1,2-Dichloroethane	ND		250	230	92	232	93	1	70-130/30
75-35-4	1,1-Dichloroethene	ND		250	215	86	218	87	1	70-130/30
156-59-2	cis-1,2-Dichloroethene	66.1		250	482	166* a	480	166* a	0	70-130/30
156-60-5	trans-1,2-Dichloroethene	2.3		250	195	77	198	78	2	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	232	93	237	95	2	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	265	106	266	106	0	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	169	68* a	171	68* a	1	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	224	90	229	92	2	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	178	71	181	72	2	70-130/30



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Method: SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M85768-2MS	N36594.D	5	09/18/09	WC	n/a	n/a	MSN1366
M85768-2MSD	N36595.D	5	09/18/09	WC	n/a	n/a	MSN1366
M85768-2	N36593.D	1	09/18/09	WC	n/a	n/a	MSN1366

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

		M85768-2		Spike	MS	MS	MSD	MSD		Limits
CAS No.	Compound	ug/l	Q	ug/l	ug/l	<b>%</b>	ug/l	%	RPD	Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	175	70	185	74	6	70-130/30
100-41-4	Ethylbenzene	ND		250	257	103	259	104	1	70-130/30
76-13-1	Freon 113	ND		250	215	86	215	86	0	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	294	118	293	117	0	70-130/30
591-78-6	2-Hexanone	ND		250	237	95	265	106	11	70-130/30
98-82-8	Isopropylbenzene	ND		250	330	132* b	349	140* b	6	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	287	115	298	119	4	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	185	74	192	77	4	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)			250	229	92	240	96	5	70-130/30
74-95-3	Methylene bromide	ND		250	232	93	233	93	0	70-130/30
75-09-2	Methylene chloride	ND		250	201	80	207	83	3	70-130/30
91-20-3	Naphthalene	ND		250	284	114	313	125	10	70-130/30
103-65-1	n-Propylbenzene	ND		250	277	111	292	117	5	70-130/30
100-42-5	Styrene	ND		250	233	93	239	96	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	244	98	249	100	2	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	313	125	323	129	3	70-130/30
127-18-4	Tetrachloroethene	ND		250	256	102	255	102	0	70-130/30
109-99-9	Tetrahydrofuran	ND		250	194	78	212	85	9	70-130/30
108-88-3	Toluene	ND		250	220	88	225	90	2	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	135	54* a	139	56* a	3	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	274	110	295	118	7	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	287	115	301	120	5	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	190	76	192	77	1	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	230	92	233	93	1	70-130/30
79-01-6	Trichloroethene	ND		250	226	90	230	92	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	200	80	201	80	0	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	240	96	249	100	4	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	280	112	292	117	4	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	288	115	303	121	5	70-130/30
75-01-4	Vinyl chloride	91.4		250	554	185* a	568	191* a	2	70-130/30
	m,p-Xylene	ND		500	496	99	502	100	1	70-130/30
95-47-6	o-Xylene	ND		250	267	107	266	106	0	70-130/30



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Method: SW846 8260B

### Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M85768-2MS	N36594.D	5	09/18/09	WC	n/a	n/a	MSN1366
M85768-2MSD	N36595.D	5	09/18/09	WC	n/a	n/a	MSN1366
M85768-2	N36593.D	1	09/18/09	WC	n/a	n/a	MSN1366

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7

CAS No.	Surrogate Recoveries	MS	MSD	M85768-2	Limits
1868-53-7	Dibromofluoromethane	90%	90%	93%	70-130%
2037-26-5	Toluene-D8	97%	97%	92%	70-130%
460-00-4	4-Bromofluorobenzene	103%	107%	89%	70-130%

⁽a) Outside control limits due to possible matrix interference. Refer to Blank Spike.



⁽b) Outside control limits. Blank Spike meets program technical requirements.

Method: SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

M85861-12MS T13845.D 5	5 09/20/09 5 09/20/09	By Prep Date AT n/a AT n/a AT n/a	Prep Batch Analytical Batch n/a MST488 n/a MST488 n/a MST488
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The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

		M85861	-12	Spike	MS	MS	MSD	MSD		Limits
CAS No.	Compound	ug/l	Q	ug/l	ug/l	%	ug/l	%	RPD	Rec/RPD
67-64-1	Acetone	ND		250	288	115	271	108	6	70-130/30
107-13-1	Acrylonitrile	ND		1250	1150	92	1080	86	6	70-130/30
71-43-2	Benzene	4.6		250	285	112	267	105	7	70-130/30
108-86-1	Bromobenzene	ND		250	285	114	272	109	5	70-130/30
75-27-4	Bromodichloromethane	ND		250	260	104	247	99	5	70-130/30
75-25-2	Bromoform	ND		250	193	77	184	74	5	70-130/30
74-83-9	Bromomethane	ND		250	239	96	226	90	6	70-130/30
78-93-3	2-Butanone (MEK)	ND		250	221	88	219	88	1	70-130/30
104-51-8	n-Butylbenzene	ND		250	299	120	281	112	6	70-130/30
135-98-8	sec-Butylbenzene	ND		250	303	121	286	114	6	70-130/30
98-06-6	tert-Butylbenzene	ND		250	307	123	286	114	7	70-130/30
75-15-0	Carbon disulfide	ND		250	256	102	243	97	5	70-130/30
56-23-5	Carbon tetrachloride	69.1		250	323	102	305	94	6	70-130/30
108-90-7	Chlorobenzene	2.9		250	287	114	274	108	5	70-130/30
75-00-3	Chloroethane	ND		250	271	108	248	99	9	70-130/30
67-66-3	Chloroform	50.0		250	313	105	287	95	9	70-130/30
74-87-3	Chloromethane	ND		250	248	99	238	95	4	70-130/30
95-49-8	o-Chlorotoluene	ND		250	296	118	274	110	8	70-130/30
106-43-4	p-Chlorotoluene	ND		250	298	119	279	112	7	70-130/30
96-12-8		ND		250	225	90	218	87	3	70-130/30
124-48-1	Dibromochloromethane	ND		250	240	96	232	93	3	70-130/30
106-93-4	1,2-Dibromoethane	ND		250	286	114	272	109	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND		250	286	114	269	108	6	70-130/30
541-73-1	1,3-Dichlorobenzene	ND		250	289	116	271	108	6	70-130/30
106-46-7	1,4-Dichlorobenzene	ND		250	281	112	264	106	6	70-130/30
75-71-8	Dichlorodifluoromethane	ND		250	236	94	249	100	5	70-130/30
75-34-3	1,1-Dichloroethane	14.5		250	282	107	260	98	8	70-130/30
107-06-2	1,2-Dichloroethane	2.4		250	256	101	239	95	7	70-130/30
75-35-4	1,1-Dichloroethene	119		250	379	104	354	94	7	70-130/30
156-59-2	cis-1,2-Dichloroethene	1180	E	250	1290	44* a	1230	20* a	5	70-130/30
156-60-5	trans-1,2-Dichloroethene	11.9		250	288	110	267	102	8	70-130/30
78-87-5	1,2-Dichloropropane	ND		250	365	146* b	341	136* b	7	70-130/30
142-28-9	1,3-Dichloropropane	ND		250	272	109	255	102	6	70-130/30
594-20-7	2,2-Dichloropropane	ND		250	209	84	193	77	8	70-130/30
563-58-6	1,1-Dichloropropene	ND		250	295	118	280	112	5	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND		250	292	117	273	109	7	70-130/30



Page 2 of 3

Method: SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

M85761 Job Number:

LEA Loureiro Eng. Associates Account:

UTC: 2009 Quarterly GW-Willow Pond Project:

M85861-12MS T13845.D	DF Analyzed 5 09/20/09 5 09/20/09 1 09/19/09	By Prep Date AT n/a AT n/a AT n/a	Prep Batch n/a n/a n/a	Analytical Batch MST488 MST488 MST488
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The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

		M85861		Spike	MS	MS	MSD	MSD		Limits
CAS No.	Compound	ug/l	Q	ug/l	ug/l	%	ug/l	%	RPD	Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	282	113	268	107	5	70-130/30
100-41-4	Ethylbenzene	ND		250	304	122	290	116	5	70-130/30
76-13-1	Freon 113	ND		250	274	110	260	104	5	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	258	103	248	99	4	70-130/30
591-78-6	2-Hexanone	ND		250	250	100	251	100	0	70-130/30
98-82-8	Isopropylbenzene	1.2		250	308	123	293	117	5	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	298	119	283	113	5	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	274	110	258	103	6	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND		250	260	104	245	98	6	70-130/30
74-95-3	Methylene bromide	ND		250	260	104	249	100	4	70-130/30
75-09-2	Methylene chloride	1.5		250	268	107	251	100	7	70-130/30
91-20-3	Naphthalene	16.3		250	294	111	323	123	9	70-130/30
103-65-1	n-Propylbenzene	ND		250	304	122	289	116	5	70-130/30
100-42-5	Styrene	ND		250	276	110	264	106	4	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	2.5		250	285	113	271	107	5	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	266	106	256	102	4	70-130/30
127-18-4	Tetrachloroethene	3610	$\mathbf{E}$	250	3750	56* a	3700	36* a	1	70-130/30
109-99-9	Tetrahydrofuran	ND		250	248	99	250	100	1	70-130/30
108-88-3	Toluene	4.7		250	288	113	271	107	6	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	228	91	214	86	6	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	246	98	311	124	23	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	260	104	275	110	6	70-130/30
71-55-6	1,1,1-Trichloroethane	4.3		250	268	105	247	97	8	70-130/30
79-00-5	1,1,2-Trichloroethane	10.3		250	279	107	268	103	4	70-130/30
79-01-6	Trichloroethene	7210	E	250	19700	4996* a	19200	4796* a	3	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	265	106	245	98	8	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	253	101	240	96	5	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	300	120	283	113	6	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	293	117	274	110	7	70-130/30
75-01-4	Vinyl chloride	109		250	330	88	316	83	4	70-130/30
	m,p-Xylene	ND		500	617	123	584	117	5	70-130/30
95-47-6	o-Xylene	1.8		250	287	114	274	109	5	70-130/30



# J.J.

#### Page 3 of 3

Method: SW846 8260B

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M85861-12MS	T13845.D	5	09/20/09	AT	n/a	n/a	MST488
M85861-12MSD	T13846.D	5	09/20/09	AT	n/a	n/a	MST488
M85861-12	T13844.D	1	09/19/09	AT	n/a	n/a	MST488

The QC reported here applies to the following samples:

M85761-8, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Surrogate Recoveries	MS	MSD	M85861-12	Limits
	Dibromofluoromethane Toluene-D8	95% 100%	94% 100%	94% 105%	70-130% 70-130%
460-00-4	4-Bromofluorobenzene	97%	98%	103%	70-130% 70-130%

(a) Outside control limits due to high level in sample relative to spike amount.

(b) Outside control limits due to possible matrix interference. Refer to Blank Spike.



#### Volatile Internal Standard Area Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Check Std: MSN1366-CC1359 Injection Date: 09/18/09 Lab File ID: N36580A.D Injection Time: 09:30

Instrument ID: GCMSN Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	159553 319106 79777	8.64 9.14 8.14	281507 563014 140754	9.50 10.00 9.00	166927 333854 83464	12.75 13.25 12.25	96934 193868 48467	15.81	98396 196792 49198	6.22 6.72 5.72
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSN1365-BS	160822	8.64	291255	9.50	160949	12.75	91863	15.31	107292	6.22
MSN1366-BS	160822	8.64	291255	9.50	160949	12.75	91863	15.31	107292	6.22
MSN1365-BSD	157892	8.64	286097	9.50	159978	12.75	89575		110261	6.22
MSN1366-BSD	157892	8.64	286097	9.50	159978	12.75	89575		110261	6.22
MSN1365-MB	150235	8.64	278024	9.50	134443	12.75			109208	6.22
MSN1366-MB	150235	8.64	278024	9.50	134443	12.75	86776		109208	6.22
ZZZZZZ	124307	8.64	226032	9.50	112811	12.75	74490		83665	6.22
M85872-1	123301	8.64	229994	9.50	111270	12.75	70501	15.31		6.22
ZZZZZZ	126892	8.64	233336	9.50	110976	12.75	69336	15.31		6.22
ZZZZZZ	129635	8.64	233620	9.50	121913	12.75	74492	15.31		6.22
M85872-1DUP	126597	8.64	230897	9.50	113871	12.75	70648		84342	6.22
ZZZZZZ	124912	8.64	228445	9.50	110909	12.75	70927	15.31		6.22
M85768-2	123331	8.64	227701	9.50	109785	12.75	71392	15.31		6.22
M85768-2MS	127742	8.64	229850	9.50	126789	12.75	78494	15.31	74649	6.22
M85768-2MSD	133206	8.64	238732	9.50	132844	12.75	78741	15.31	81420	6.22
ZZZZZZ	132310	8.64	243164	9.50	117983	12.75	75144		84672	6.22
ZZZZZZ	126384	8.64	230885	9.50	110979	12.75	72008	15.31	84495	6.22
ZZZZZZ	124416	8.64	227142	9.50	109102	12.75	69753	15.31	85877	6.22
ZZZZZZ	122842	8.64	227670	9.50	109982	12.75	73126	15.31		6.22
ZZZZZZ	121390	8.64	226307	9.50	107384	12.75	71940	15.31	78086	6.22
M85761-1	121895	8.64	226236	9.50	110750	12.75	69986	15.31	89270	6.22
M85761-3	120259	8.64	219354	9.50	104496	12.75	70197	15.31		6.22
M85761-5	121413	8.64	221312	9.50	101376	12.75	68724	15.31	66510	6.22
M85761-7	123156	8.64	218445	9.50	103715	12.75	67368	15.31	78187	6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



#### Volatile Internal Standard Area Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Check Std: MSN1365-CC1359 Injection Date: 09/18/09 Lab File ID: N36580.D Injection Time: 09:30

Instrument ID: GCMSN Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	159553 319106 79777	8.64 9.14 8.14	281507 563014 140754	9.50 10.00 9.00	166927 333854 83464	12.75 13.25 12.25	96934 193868 48467		98396 196792 49198	6.22 6.72 5.72
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MSN1365-BS	160822	8.64	291255	9.50	160949	12.75	91863	15 31	107292	6.22
MSN1366-BS	160822	8.64	291255	9.50	160949	12.75			107292	6.22
MSN1365-BSD	157892	8.64	286097	9.50	159978	12.75	89575		110261	6.22
MSN1366-BSD	157892	8.64	286097	9.50	159978	12.75	89575		110261	6.22
MSN1365-MB	150235	8.64	278024	9.50	134443	12.75	86776	15.31	109208	6.22
MSN1366-MB	150235	8.64	278024	9.50	134443	12.75	86776		109208	6.22
ZZZZZZ	124307	8.64	226032	9.50	112811	12.75	74490	15.31	83665	6.22
M85872-1	123301	8.64	229994	9.50	111270	12.75	70501	15.31	80599	6.22
ZZZZZZ	126892	8.64	233336	9.50	110976	12.75	69336	15.31	78044	6.22
ZZZZZZ	129635	8.64	233620	9.50	121913	12.75	74492	15.31	80295	6.22
M85872-1DUP	126597	8.64	230897	9.50	113871	12.75	70648	15.31	84342	6.22
ZZZZZZ	124912	8.64	228445	9.50	110909	12.75	70927	15.31	77100	6.22
M85768-2	123331	8.64	227701	9.50	109785	12.75	71392	15.31	79301	6.22
M85768-2MS	127742	8.64	229850	9.50	126789	12.75	78494	15.31	74649	6.22
M85768-2MSD	133206	8.64	238732	9.50	132844	12.75	78741	15.31	81420	6.22
ZZZZZZ	132310	8.64	243164	9.50	117983	12.75	75144	15.31	84672	6.22
ZZZZZZ	126384	8.64	230885	9.50	110979	12.75	72008	15.31	84495	6.22
ZZZZZZ	124416	8.64	227142	9.50	109102	12.75	69753	15.31	85877	6.22
ZZZZZZ	122842	8.64	227670	9.50	109982	12.75	73126	15.31	79913	6.22
ZZZZZZ	121390	8.64	226307	9.50	107384	12.75	71940	15.31	78086	6.22
ZZZZZZ	123423	8.64	224441	9.50	106033	12.75	71362	15.31	75809	6.22
M85761-1	121895	8.64	226236	9.50	110750	12.75	69986	15.31	89270	6.22
M85761-3	120259	8.64	219354	9.50	104496	12.75	70197	15.31		6.22
M85761-5	121413	8.64	221312	9.50	101376	12.75	68724	15.31	66510	6.22
M85761-7	123156	8.64	218445	9.50	103715	12.75	67368	15.31	78187	6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9



⁽a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.

⁽b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

#### Volatile Internal Standard Area Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Check Std: MST488-CC487 Injection Date: 09/19/09 Lab File ID: T13820.D Injection Time: 12:50

Instrument ID: GCMST Method: SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std	396883	8.71	616450	9.60	478280	12.92	344996		106337	6.20
Upper Limit ^a Lower Limit ^b	793766 198442	9.21 8.21	1232900 308225	10.10 9.10	956560 239140	13.42 12.42		16.02 15.02		6.70 5.70
Lab	IS 1		IS 2		IS 3		IS 4		IS 5	
Sample ID	AREA	RT	AREA	RT	AREA	RT	AREA	RT	AREA	RT
MST488-BS	417512	8.71	648696	9.60	483559	12.92	340472	15.52	110160	6.20
MST488-BSD	426460	8.71	648583	9.60	487908	12.92	350138	15.52	118044	6.21
MST488-MB	375060	8.71	568190	9.60	424749	12.92	273799	15.52	109054	6.21
ZZZZZZ	355772	8.71	543139	9.59	400932	12.92	250762	15.52	97207	6.21
ZZZZZZ	328726	8.71	514320	9.60	388086	12.92	238204	15.52	99209	6.21
ZZZZZZ	348937	8.71	530822	9.60	408295	12.92	276473	15.52	98121	6.21
M85761-8	329206	8.71	513099	9.60	389428	12.92	244452	15.52	99145	6.21
M85761-9	310499	8.71	484033	9.60	378570	12.92	232754	15.52	87289	6.20
M85761-12	305093	8.71	471063	9.60	369595	12.92	220591	15.52	86496	6.20
M85761-14	307367	8.71	473481	9.59	376041	12.92	230462	15.52	92657	6.20
M85761-17	314919	8.71	475582	9.59	377581	12.92	233357	15.52	95749	6.21
ZZZZZZ	343919	8.71	537757	9.60	465229	12.92	282673	15.52	95402	6.21
ZZZZZZ	357863	8.71	564505	9.60	462646	12.92	285858	15.52	87878	6.21
ZZZZZZ	364303	8.71	569124	9.60	462989	12.92	281200	15.52	81542	6.21
ZZZZZZ	384811	8.71	598161	9.60	488626	12.91	298752	15.52	88715	6.21
ZZZZZZ	362856	8.70	566561	9.60	453497	12.91			84036	6.20
ZZZZZZ	347062	8.70	525904	9.59	411586	12.91	250043	15.51	77913	6.20
ZZZZZZ	340113	8.70	514102	9.59	399076	12.91		15.52		6.20
ZZZZZZ	348209	8.70	537282	9.59	439402	12.91		15.52		6.20
ZZZZZZ	349049	8.70	528373	9.59	434032	12.91		15.51		6.20
ZZZZZZ	357969	8.70	548011	9.59	441401	12.91			82439	6.21
M85861-12	367637	8.70	551565	9.59	451522		279794		88918	6.20
M85861-12MS	367715	8.70	563729	9.59	440129	12.91			82855	6.20
M85861-12MSD	386130	8.70	582271	9.59	450728		314761		90635	6.20

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



# Volatile Surrogate Recovery Summary Job Number: M85761

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Method: SW846 8260B Matrix: AQ

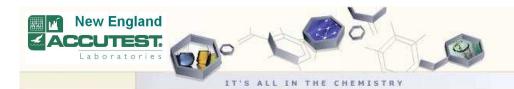
Samples and QC shown here apply to the above method

Lab	Lab			
Sample ID	File ID	<b>S</b> 1	S2	S3
M85761-1	N36602.D	93.0	93.0	93.0
M85761-3	N36603.D	91.0	92.0	88.0
M85761-5	N36604.D	93.0	90.0	89.0
M85761-7	N36605.D	90.0	91.0	89.0
M85761-8	T13828.D	98.0	97.0	99.0
M85761-9	T13829.D	101.0	99.0	100.0
M85761-12	T13830.D	102.0	98.0	102.0
M85761-14	T13831.D	100.0	92.0	99.0
M85761-17	T13832.D	99.0	100.0	99.0
M85768-2MS	N36594.D	90.0	97.0	103.0
M85768-2MSD	N36595.D	90.0	97.0	107.0
M85861-12MS	T13845.D	95.0	100.0	97.0
M85861-12MSD	T13846.D	94.0	100.0	98.0
MSN1366-BS	N36581A.D	89.0	96.0	110.0
MSN1366-BSD	N36582A.D	91.0	97.0	111.0
MSN1366-MB	N36584A.D	91.0	92.0	95.0
MST488-BS	T13821.D	95.0	98.0	97.0
MST488-BSD	T13822.D	93.0	99.0	95.0
MST488-MB	T13824.D	94.0	98.0	99.0

Recovery Surrogate Compounds Limits

S1 = Dibromofluoromethane70-130% S2 = Toluene-D870-130% S3 = 4-Bromofluorobenzene 70-130%





## GC Semi-volatiles

## **QC Data Summaries**

### Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
   Surrogate Recovery Summaries



Method Blank Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample	File ID	DF	Analyzed	By	Prep Date 09/16/09	Prep Batch	Analytical Batch
OP19489-MB	BC32014.D	1	09/22/09	KD		OP19489	GBC1678

The QC reported here applies to the following samples:

Method: CT-ETPH 7/06

M85761-1, M85761-3, M85761-5, M85761-7, M85761-9, M85761-11, M85761-14, M85761-17

CAS No. Compound RLUnits Q Result

> CT-DRO (C9-C36) ND 0.080mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane **50**% 50-149%



Method: SW846 8082

### Method Blank Summary

Job Number: M85761 Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project:

Sample	File ID	DF	Analyzed	By	Prep Date 09/16/09	Prep Batch	Analytical Batch
OP19488-MB	EF70226.D	1	09/17/09	CZ		OP19488	GEF3230

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	Surrogate Recoveries		Limits		
877-09-8	Tetrachloro-m-xylene	85%	30-150	%	
877-09-8	Tetrachloro-m-xylene	82%	30-150	%	
2051-24-3	Decachlorobiphenyl	44%	30-150	%	
2051-24-3	Decachlorobiphenyl	46%	30-150	%	



## Blank Spike Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP19489-BS	File ID BC32016.D	DF 1	Analyzed 09/22/09	By KD	Prep Date 09/16/09	Prep Batch OP19489	Analytical Batch GBC1678

The QC reported here applies to the following samples:

Method: CT-ETPH 7/06

M85761-1, M85761-3, M85761-5, M85761-7, M85761-9, M85761-11, M85761-14, M85761-17

Spike BSP BSP

CAS No. Compound mg/l mg/l % Limits

CT-DRO (C9-C36) 0.7 0.445 64 60-120

CAS No. Surrogate Recoveries BSP Limits

3386-33-2 1-Chlorooctadecane 56% 50-149%



Method: SW846 8082

### Blank Spike Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date 09/16/09	Prep Batch	Analytical Batch
OP19488-BS	EF70227.D	1	09/17/09	CZ		OP19488	GEF3230

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7, M85761-9, M85761-12, M85761-14, M85761-17

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268	2	2.3 ND ND ND ND ND ND ND 2.0 ND	115	40-140 40-140 40-140 40-140 40-140 40-140 40-140
CAS No. 877-09-8 877-09-8 2051-24-3 2051-24-3	Surrogate Recoveries  Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	90% 89% 51% 50%	30-1 30-1	its 50% 50% 50% 50%	



# 6.3.1

Page 1 of 1

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample         File ID         DF         Analyzed         By         Prep Date         Prep Batch         Analytical F           OP19489-MS         BC32018.D         1         09/22/09         KD         09/16/09         OP19489         GBC1678           OP19489-MSD         BC32020.D         1         09/22/09         KD         09/16/09         OP19489         GBC1678           M85833-11         BC32046.D         1         09/23/09         KD         09/16/09         OP19489         GBC1678
-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

The QC reported here applies to the following samples:

Method: CT-ETPH 7/06

M85761-1, M85761-3, M85761-5, M85761-7, M85761-9, M85761-11, M85761-14, M85761-17

CAS No.	Compound	M85833-11 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.472	67	0.471	67	0	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8	5833-11	Limits			
3386-33-2	1-Chlorooctadecane	53%	64%	63%		50-149%			



Method: SW846 8082

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample         File ID         DF         Analyzed         By         Prep Date         Prep Batch         Analytical Batch           OP19488-MS         EF70228.D         1         09/17/09         CZ         09/16/09         OP19488         GEF3230           OP19488-MSD         EF70229.D         1         09/17/09         CZ         09/16/09         OP19488         GEF3230           M85833-10         EF70230.D         1         09/17/09         CZ         09/16/09         OP19488         GEF3230	OP19488-MSD	EF70229.D	1	09/17/09	CZ CZ	09/16/09	OP19488	GEF3230
-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------	-------------	-----------	---	----------	----------	----------	---------	---------

The QC reported here applies to the following samples:

M85761-1, M85761-3, M85761-5, M85761-7, M85761-9, M85761-12, M85761-14, M85761-17

		M05022 10	n (	Cmileo	MS	MS	MSD	MSD		Limits
CACNA	Commonad	M85833-10		Spike					DDD	
CAS No.	Compound	ug/l Q	, ,	ug/l	ug/l	%	ug/l	%	RPD	Rec/RPD
12674 11 2	Aroclor 1016	ND		2	2.2	110	2.1	105	5	40-140/50
		ND	•	L	ND	110		103		40-140/50
	Aroclor 1221						ND		nc	
11141-16-5	Aroclor 1232	ND			ND		ND		nc	40-140/50
53469-21-9	Aroclor 1242	ND			ND		ND		nc	40-140/50
12672-29-6	Aroclor 1248	ND			ND		ND		nc	40-140/50
11097-69-1	Aroclor 1254	ND			ND		ND		nc	40-140/50
11096-82-5	Aroclor 1260	ND		2	2.1	105	1.9	95	10	40-140/50
37324-23-5	Aroclor 1262	ND			ND		ND		nc	40-140/50
11100-14-4	Aroclor 1268	ND			ND		ND		nc	40-140/50
CAS No.	Surrogate Recoveries	MS	1	MSD	M8	5833-10	Limits			
C115 1.0.	Surrogate recoveries	1415	-		1110	2022 10	Limits			
877-09-8	Tetrachloro-m-xylene	82%		73%	80%	6	30-150%	D		
877-09-8	Tetrachloro-m-xylene	82%		84%	89%		30-150%			
2051-24-3		45%		47%	48%		30-150%			
	Decachlorobiphenyl									
2051-24-3	Decachlorobiphenyl	46%	4	48%	46%	6	30-150%	)		



### Semivolatile Surrogate Recovery Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH 7/06 Matrix: AQ

Samples and QC shown here apply to the above method

Lab File ID	S1 a
BC32048.D	63.0
BC32050.D	61.0
BC32052.D	72.0
BC32054.D	74.0
BC32056.D	59.0
BC32058.D	70.0
BC32060.D	62.0
BC32062.D	75.0
BC32016.D	56.0
BC32014.D	50.0
BC32018.D	53.0
BC32020.D	64.0
	File ID  BC32048.D BC32050.D BC32052.D BC32054.D BC32056.D BC32058.D BC32060.D BC32062.D BC32016.D BC32014.D BC32018.D

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



### Semivolatile Surrogate Recovery Summary

Job Number: M85761

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8082 Matrix: AQ

Samples and QC shown here apply to the above method

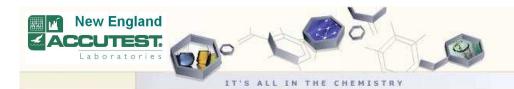
Lab	Lab				
Sample ID	File ID	S1 a	S1 b	S2 a	S2 ^b
M85761-1	EF70242.D	74.0	79.0	54.0	56.0
M85761-3	EF70243.D	77.0	79.0	72.0	73.0
M85761-5	EF70244.D	91.0	93.0	85.0	90.0
M85761-7	EF70245.D	91.0	103.0	83.0	85.0
M85761-9	EF70246.D	81.0	96.0	59.0	64.0
M85761-12	EF70250.D	80.0	88.0	76.0	80.0
M85761-14	EF70251.D	82.0	98.0	95.0	99.0
M85761-17	EF70252.D	88.0	91.0	69.0	71.0
OP19488-BS	EF70227.D	90.0	89.0	51.0	50.0
OP19488-MB	EF70226.D	85.0	82.0	44.0	46.0
OP19488-MS	EF70228.D	82.0	82.0	45.0	46.0
OP19488-MSD	EF70229.D	73.0	84.0	47.0	48.0

Surrogate Recovery Compounds Limits

S1 = Tetrachloro-m-xylene S2 = Decachlorobiphenyl S0-150%

(a) Recovery from GC signal #1(b) Recovery from GC signal #2





# **Metals Analysis**

## **QC Data Summaries**

### Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



# BLANK RESULTS SUMMARY Part 2 - Method Blanks

#### Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:

09/14/09

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	27	40		
Antimony	6.0	1.4	1.6		
Arsenic	10	1	1.8	-0.30	<10
Barium	200	.57	1.1	0.50	<200
Beryllium	4.0	.15	.4		
Boron	100	.65	2.3		
Cadmium	4.0	.24	1.9	0.10	<4.0
Calcium	5000	7.6	15		
Chromium	10	.81	1.1	-0.30	<10
Cobalt	50	.25	.3		
Copper	25	2.2	4	0.80	<25
Gold	50	1.1	4.2		
Iron	100	3.7	13		
Lead	5.0	1.1	2.7	0.70	<5.0
Magnesium	5000	37	77		
Manganese	15	.12	1.1		
Molybdenum	100	.22	.8		
Nickel	40	.24	1.3	0.20	<40
Palladium	50	2.2	4		
Platinum	50	9.3	13		
Potassium	5000	39	46		
Selenium	10	1.9	3.5	1.1	<10
Silicon	100	8.9	36		
Silver	5.0	.54	1.3	0.10	<5.0
Sodium	5000	61	160		
Strontium	10	.24	.3		
Thallium	10	1.2	1.3		
Tin	100	.65	1.3		
Titanium	50	.74	.8		
Tungsten	100	5.6	8		
Vanadium	30	.68	1.6		
Zinc	20	.74	1.5	1.1	<20

Associated samples MP14096: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16, M85761-18



# BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

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#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

09/14/09

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

0.0

anr

anr

16.8

537

Sodium Strontium Thallium Tin

Titanium

Tungsten Vanadium

Zinc

200

500

106.5

0.0

16.8

0.0

15.9

NC

5.5 0-20

09/14/09

M85739-2 M85739-2 Spikelot QC QC Original DUP MPICP % Rec Limits Limits Metal Original MS RPD Aluminum anr Antimony 107.8 0.0 Arsenic 539 500 75-125 0.0 0.0 NC 0 - 20Barium 118 2200 2000 104.1 75-125 118 117 0.9 0-20 Beryllium Boron anr Cadmium 0.30 543 500 108.5 75-125 0.30 0.30 0.0 0-20 Calcium Chromium 0.0 506 500 101.2 75-125 0.0 0.0 NC 0-20 Cobalt anr Copper 0.0 521 500 104.2 75-125 0.0 0.0 NC 0-20 Gold Iron anr Lead 0.0 1000 1000 100.0 75-125 NC 0-20 Magnesium anr Manganese anr Molybdenum anr Nickel 2.0 502 500 100.0 75-125 2.0 1.9 5.1 0-20 Palladium Platinum Potassium Selenium 0.0 550 500 110.0 75-125 0.0 0.0 NC 0-20 Silicon Silver 213 75-125 0-20

Associated samples MP14096: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16, M85761-18

104.0 75-125



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85761
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/1

Matrix Type:	AQUEOUS					Unit	s: ug/l		
Prep Date:			09/14/09	)				09/14/09	)
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum	anr								
Antimony									
Arsenic	520	500	104.0	80-120	518	500	103.6	0.4	20
Barium	2030	2000	101.5	80-120	2010	2000	100.5	1.0	20
Beryllium									
Boron	anr								
Cadmium	526	500	105.2	80-120	513	500	102.6	2.5	20
Calcium									
Chromium	497	500	99.4	80-120	488	500	97.6	1.8	20
Cobalt	anr								
Copper	505	500	101.0	80-120	494	500	98.8	2.2	20
Gold									
Iron	anr								
Lead	1000	1000	100.0	80-120	994	1000	99.4	0.6	20
Magnesium	anr								
Manganese	anr								
Molybdenum	anr								
Nickel	496	500	99.2	80-120	493	500	98.6	0.6	20
Palladium									
Platinum									
Potassium									
Selenium	533	500	106.6	80-120	524	500	104.8	1.7	20
Silicon									
Silver	206	200	103.0	80-120	203	200	101.5	1.5	20
Sodium									
Strontium									
Thallium									
Tin	anr								
Titanium	anr								
Tungsten									
Vanadium									
Zinc	517	500	103.4	80-120	505	500	101.0	2.3	20

Associated samples MP14096: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16, M85761-18



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Matrix Type: AQUEOUS Methods: SW846 6010B Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

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#### SERIAL DILUTION RESULTS SUMMARY

# Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/1

Prep Date: 09/14/09

Metal	M85739-2 Original	SDL 1:5	%DIF	QC Limits
Aluminum	anr			
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	118	119	1.1	0-10
Beryllium				
Boron	anr			
Cadmium	0.300	0.00	100.0(a)	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt	anr			
Copper	0.00	0.00	NC	0-10
Gold				
Iron	anr			
Lead	0.00	0.00	NC	0-10
Magnesium	anr			
Manganese	anr			
Molybdenum	anr			
Nickel	2.00	2.70	35.0 (a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin	anr			
Titanium	anr			
Tungsten				
Vanadium				
Zinc	16.8	18.6	10.7 (a)	0-10

Associated samples MP14096: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16, M85761-18

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#### SERIAL DILUTION RESULTS SUMMARY

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14096 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $% \left( 1,0\right) =0$ 

(anr) Analyte not requested
(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

#### Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 09/15/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.035	.048	0.023	<0.20

Associated samples MP14104: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16, M85761-18

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

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#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14104 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

09/15/09 09/15/09 Prep Date:

Metal	M85739- Origina		Spikelot HGRWS1		QC Limits	M85739-2 Original		RPD	QC Limits	
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20	

Associated samples MP14104: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16,

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M85761 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14104 Matrix Type: AQUEOUS Methods: SW846 7470A Units: ug/l

Prep Date:

09/15/09

09/15/09

Metal	BSP Result	Spikelot HGRWS1		QC Limits		Spikelot HGRWS1		BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.9	3	96.7	0.0	20

Associated samples MP14104: M85761-2, M85761-4, M85761-6, M85761-10, M85761-13, M85761-15, M85761-16, M85761-18

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

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12/31/09 **Reissue #1** 

12/31/09











### Technical Report for

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M87915

Sampling Date: 12/08/09

#### Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin MCKinney

Total number of pages in report: 154





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

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Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)

Reza Pand Lab Director





December 23, 2009

Ms. Robin McKinney Loureiro Eng. 100 Northwest Drive Plainville, CT 06062

RE: Accutest Job M87915 (Revision 1)

Dear Ms. McKinney

The final report for Accutest job number M87915 has been corrected to reflect the correct sample ID.

This is as requested in your email on 12/23/09.

Sincerely,

Frank D'Agostino

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Accutest Laboratories of New England, Inc.

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# **Sample Summary**

Job No:

M87915

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matri Code		Client Sample ID
M87915-1	12/08/09	12:55 RJD	12/08/09	AQ	Ground Water	1136013
M87915-2	12/08/09	12:55 RJD	12/08/09	AQ	Ground Water	1136013UF
M87915-3	12/08/09	12:55 RJD	12/08/09	AQ	Ground Water	1136028
M87915-4	12/08/09	12:55 RJD	12/08/09	AQ	Ground Water	1136028UF
M87915-5	12/08/09	15:20 RJD	12/08/09	AQ	Ground Water	1136014
M87915-6	12/08/09	15:20 RJD	12/08/09	AQ	Ground Water	1136014UF
M87915-7	12/08/09	11:00 RJD	12/08/09	AQ	Ground Water	1136011
M87915-8	12/08/09	11:00 RJD	12/08/09	AQ	Ground Water	1136011UF
M87915-9	12/08/09	13:10 RJD	12/08/09	AQ	Ground Water	1136012
M87915-10	12/08/09	13:10 RJD	12/08/09	AQ	Ground Water	1136012UF
M87915-11	12/08/09	15:15 RJD	12/08/09	AQ	Ground Water	1136010
M87915-12	12/08/09	15:15 RJD	12/08/09	AQ	Ground Water	1136010UF
M87915-13	12/08/09	09:50 RJD	12/08/09	AQ	Ground Water	1136007



# Sample Summary (continued)

Job No:

M87915

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample	Collected		Danster 1	Matri		Client
Number	Date	Time By	Received	Code	Type	Sample ID
M87915-14	12/08/09	09:50 RJD	12/08/09	AQ	Ground Water	1136007UF
M87915-15	12/08/09	11:20 RJD	12/08/09	AQ	Ground Water	1136008
M87915-16	12/08/09	11:20 RJD	12/08/09	AQ	Ground Water	1136008UF
M87915-17	12/08/09	13:00 RJD	12/08/09	AQ	Ground Water	1136009
M87915-18	12/08/09	13:00 RJD	12/08/09	AQ	Ground Water	1136009UF
M87915-19	12/08/09	15:00 RJD	12/08/09	AO	Ground Water	1136017
M87915-20	12/08/09	13:00 RJD	12/08/09	AO	Ground Water	1136015
M87915-21	12/08/09	13:00 RJD	12/08/09	ΑO	Ground Water	1136015UF
	1 0 0 0 0 0					230 333 63
M87915-22	12/08/09	15:05 RJD	12/08/09	ΑO	Ground Water	1136016
110//10 22	12/00/09	10.00 102	12, 00, 0)			1100010
M87915-23	12/08/09	15:05 RJD	12/08/09	ΑO	Ground Water	1136016UF
110//10 20	12/00/09	10.00 102	12, 00, 0)			110001001
M87915-24	12/08/09	15:50 RJD	12/08/09	40	Ground Water	1136027
1101713-27	12,00,07	15.50 131	12,00,07	114	Ciouna muoi	1133021
M87915-25	12/08/09	15:50 RJD	12/08/09	40	Ground Water	1136027UF
1410/713-23	12/00/09	15.50 KJD	12/00/09	лų	Ground water	113002701
M87915-26	12/08/00	10:00 RJD	12/08/09	40	Ground Water	1136026
10101713-20	12/00/09	10.00 KJD	12/00/09	AŲ	Ground water	1130020





# Sample Summary (continued)

Loureiro Eng. Associates

Job No: M87915

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected		D	Matr	<del></del>	Client
Number	Date	Time By	Received	Coae	Type	Sample ID
M87915-27	12/08/09	15:00 RJD	12/08/09	AQ	Ground Water	1136017UF





#### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M87915

Site: UTC: 2009 Quarterly GW-Willow Pond Report Date 12/31/2009 11:55:18 AM

27 Sample(s) were collected on 12/08/2009 and were received at Accutest on 12/08/2009 properly preserved, at 0.1 Deg. C and intact. These Samples received an Accutest job number of M87915. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

#### Volatiles by GCMS By Method SW846 8260B

Matrix AO Batch ID: MSE1811

- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M87915-1MS, M87915-1MSD were used as the QC samples indicated.
- Blank Spike Recovery(s) for Chloroethane, Chloromethane are outside control limits. Blank Spike meets program technical requirements.
- Matrix Spike Recovery(s) for 2-Butanone (MEK), Acetone, Acrylonitrile, Carbon disulfide are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Matrix Spike Duplicate Recovery(s) for 2-Butanone (MEK), Acetone, Acrylonitrile, Carbon disulfide, Tetrahydrofuran are outside control limits. Outside control limits due to possible matrix interference. Refer to Blank Spike.
- Continuing calibration check standard MSE1811-CC1790 for dichlorodifluoromethane, acetone, 2-hexanone exceed 30% Difference. This check standard met RCP criteria.
- M87915-1MS/MSD for Chloromethane, Chloroethane: Outside control limits. Blank Spike meets program technical requirements.
- Initial calibration verification standard MSE1790-ICV1790 for acetone exceed 35% Difference.
- Initial calibration standard MSE1790-ICC1790 for acetone, 1,2,3-trichloropropane, 1,2,4-trichlorobenzene, 1,2,3-trichlorobenzene, naphthalene is employed quadratic regression.
- BSD Recovery(s) for 2-Hexanone, Chloromethane are outside control limits. Blank Spike meets program technical requirements.

Matrix AQ Batch ID: MSE1814

- All samples were analyzed within the recommended method holding time.
- Sample(s) M88204-1MS, M88204-1MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Blank Spike Recovery(s) for 2-Butanone (MEK), 2-Hexanone are outside control limits. Associated samples are non-detect for this compound.
- RPD(s) for MSD for 1,2,3-Trichlorobenzene, Naphthalene are outside control limits for sample M88204-1MSD. High RPD due to possible matrix interference and/or sample non-homogeneity.
- BSD Recovery(s) for 2-Hexanone are outside control limits. Associated samples are non-detect for this compound.
- MS/MSD Recovery(s) for a few compounds are outside control limits. Associated samples are non-detect for this compound.
- MS/MSD Recovery(s) for 1,2,4-Trimethylbenzene are outside control limits. Outside control limits due to high level in sample relative to spike amount.
- Continuing calibration check standard MSE1814-CC1813 for acetone exceed 30% Difference. This check standard met RCP criteria.
- MS/MSD Recovery(s) for Acetone are outside control limits. Blank Spike meets program technical requirements.
- MS/MSD Recovery(s) for some compounds are outside control limits. Outside control limits due to possible matrix interference.
   Refer to Blank Spike.



### Volatiles by GCMS By Method SW846 8260B

Matrix AQ Batch ID: MSE1814

- Initial calibration standard MSE1813-ICC1813 for bromomethane, freon-113, acetone, 2-hexanone, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, naphthalene, 1,2,3-trichlorobenzene is employed quadratic regression.
- BS/BSD Recovery(s) for Acetone are outside control limits. Blank Spike meets program technical requirements.

### Extractables by GC By Method CT-ETPH 7/06

Matrix AO

Batch ID: OP20189

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M87925-22MS, M87925-22MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

Matrix AQ

Batch ID: OP20202

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M88079-6MS, M88079-6MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

### Extractables by GC By Method SW846 8082

Matrix AQ

Batch ID: OP20201

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M88079-5MS, M88079-5MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.

#### Metals By Method SW846 6010B

Matrix AQ

Batch ID: MP14565

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M87915-10DUP, M87915-10MS, M87915-10SDL were used as the QC samples for metals.
- RPD(s) for Serial Dilution for Lead, Nickel are outside control limits for sample MP14565-SD1. Percent difference acceptable due to low initial sample concentration (< 50 times IDL).</p>
- Only selected metals requested.



### Metals By Method SW846 7470A

Matrix AQ Batch ID: MP14563

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M87880-4DUP, M87880-4MS were used as the QC samples for metals.
- Only selected metals requested.

Matrix AQ Batch ID: MP14583

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M87925-22DUP, M87925-22MS were used as the QC samples for metals.
- Only selected metals requested.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M87915).



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Samn	10	Recii	ITC
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Client Sample ID: 1136013 Lab Sample ID: M87915-1

 Lab Sample ID:
 M87915-1
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41711.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	0.56	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	4.3	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	3.5	1.0	ug/l	
107-06-2	1,2-Dichloroethane	1.2	1.0	ug/l	
75-35-4	1,1-Dichloroethene	10	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	10.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136013

 Lab Sample ID:
 M87915-1
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	7.6	1.0	ug/l
109-99-9	Tetrahydrofuran	18.4	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	3.2	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	63.3	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	3.1	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

75%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank

 $N = \ Indicates \ presumptive \ evidence \ of \ a \ compound$ 



Client Sample ID: 1136013

 Lab Sample ID:
 M87915-1
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Report of Analysis** 

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	80%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1136013

Lab Sample ID:M87915-1Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35717.D 1 12/19/09 KD 12/14/09 OP20189 GBC1823

Run #2

Run #1 1000 ml Final Volume
1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.268 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 101% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136013

 Lab Sample ID:
 M87915-1
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72352.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume
Run #1 1000 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l	
11104-28-2	Aroclor 1221	ND	0.25	ug/l	
11141-16-5	Aroclor 1232	ND	0.25	ug/l	
53469-21-9	Aroclor 1242	ND	0.25	ug/l	
12672-29-6	Aroclor 1248	ND	0.25	ug/l	
11097-69-1	Aroclor 1254	ND	0.25	ug/l	
11096-82-5	Aroclor 1260	ND	0.25	ug/l	
37324-23-5	Aroclor 1262	ND	0.25	ug/l	
11100-14-4	Aroclor 1268	ND	0.25	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Lim	its
877-09-8	Tetrachloro-m-xylene	80%		30-1	50%
877-09-8	Tetrachloro-m-xylene	100%		30-1	50%
2051-24-3	Decachlorobiphenyl	73%		30-1	50%
2051-24-3	Decachlorobiphenyl	75%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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### **Report of Analysis**

Client Sample ID: 1136013UF Lab Sample ID: M87915-2

**Date Sampled:** 12/08/09 **Date Received:** 12/08/09 AQ - Ground Water

Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Matrix:

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	6.6	4.0	na/1	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Arsenic			ug/l	1	12/10/09	12/14/09 PY		
Barium	351	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	12/10/09	12/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	89.4	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA11275 (2) Instrument QC Batch: MA11288 (3) Prep QC Batch: MP14563 (4) Prep QC Batch: MP14565

Client Sample ID: 1136028

 Lab Sample ID:
 M87915-3
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed  $\mathbf{B}\mathbf{y}$ Run #1 E41816.D 1 12/21/09 SC n/a n/a MSE1814 Run #2

Purge Volume
Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	0.65	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	5.8	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	5.8	1.0	ug/l	
107-06-2	1,2-Dichloroethane	1.4	1.0	ug/l	
75-35-4	1,1-Dichloroethene	13.4	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	17.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



### C

### **Report of Analysis**

Client Sample ID: 1136028

 Lab Sample ID:
 M87915-3
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	6.4	1.0	ug/l
109-99-9	Tetrahydrofuran	23.3	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	5.0	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	80.3	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	4.3	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 97% 70-130%

 $ND = \ Not \ detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1136028

 Lab Sample ID:
 M87915-3
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	110%		70-130%
460-00-4	4-Bromofluorobenzene	97%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136028

Lab Sample ID:M87915-3Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35718.D 1 12/19/09 KD 12/14/09 OP20189 GBC1823

Run #2

Initial Volume Final Volume
Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.209 0.086 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 74% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1136028

 Lab Sample ID:
 M87915-3
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72353.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume

Run #1 980 ml 5.0 ml

Run #2

2051-24-3

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262	ND ND ND ND ND ND ND ND ND ND ND ND	0.26 0.26 0.26 0.26 0.26 0.26 0.26 0.26	ug/l ug/l ug/l ug/l ug/l ug/l ug/l ug/l
11100-14-4	Aroclor 1268	ND	0.26	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	75% 97% 78%		30-150% 30-150% 30-150%

80%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Page 1 of 1

Client Sample ID: 1136028UF

Lab Sample ID:M87915-4Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
A	7.4	4.0	/1	1	12/10/00	12/14/00 PV	avvo.45 co.40p 2	avvo. 15 2010 1 4
Arsenic	7.4	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Barium	349	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	12/10/09	12/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	86.4	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA11275(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14563(4) Prep QC Batch: MP14565

Client Sample ID: 1136014

 Lab Sample ID:
 M87915-5
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File IDDFAnalyzedByPrep DatePrep BatchAnalytical BatchRun #1E41716.D112/15/09SCn/an/aMSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



 Lab Sample ID:
 M87915-5
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1, 1, 2, 2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limi	ts

1868-53-7 Dibromofluoromethane 75% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

 $N = \ Indicates \ presumptive \ evidence \ of \ a \ compound$ 



## C

### **Report of Analysis**

Client Sample ID: 1136014

 Lab Sample ID:
 M87915-5
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	81%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136014

Lab Sample ID: M87915-5 **Date Sampled:** 12/08/09 Matrix: AQ - Ground Water **Date Received:** 12/08/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC35719.D 1 12/19/09 KD 12/14/09 OP20189 GBC1823

Run #2

**Initial Volume Final Volume** Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.296 0.080 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 71% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136014 Lab Sample ID: M87915-5

**Date Sampled:** 12/08/09 Matrix: AQ - Ground Water **Date Received:** 12/08/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72354.D 1 12/22/09 SL12/15/09 OP20201 GEF3314

Run #2

**Initial Volume Final Volume** 

Run #1 900 ml 5.0 ml

Run #2

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248	ND ND ND ND	0.28 0.28 0.28 0.28 0.28	ug/l ug/l ug/l ug/l ug/l
11097-69-1 11096-82-5 37324-23-5 11100-14-4	Aroclor 1254 Aroclor 1260 Aroclor 1262 Aroclor 1268	ND ND ND ND	0.28 0.28 0.28 0.28	ug/l ug/l ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl Decachlorobiphenyl	76% 91% 91% 95%		30-150% 30-150% 30-150% 30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1136014UF

Lab Sample ID:M87915-6Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ng/1	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
			ug/l	1	, - 0, 0,			
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	12/10/09	12/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA11275(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14563(4) Prep QC Batch: MP14565

Client Sample ID: 1136011

 Lab Sample ID:
 M87915-7
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File IDDFAnalyzedByPrep DatePrep BatchAnalytical BatchRun #1E41717.D112/15/09SCn/an/aMSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	1.5	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1136011

 Lab Sample ID:
 M87915-7
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	ts

75%

____

ND = Not detected RL = Reporting Limit

1868-53-7

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1136011

 Lab Sample ID:
 M87915-7
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1136011

Lab Sample ID: M87915-7 **Date Sampled:** 12/08/09 Matrix: AQ - Ground Water **Date Received:** 12/08/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC35720.D 1 12/19/09 KD 12/14/09 OP20189 GBC1823

Run #2

**Initial Volume Final Volume** Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.084 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 90% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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### Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136011 Lab Sample ID: M87915-7

 Lab Sample ID:
 M87915-7
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72355.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume

Run #1 850 ml 5.0 ml

Run #2

2051-24-3

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5 37324-23-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260 Aroclor 1262	ND ND ND ND ND ND ND ND ND ND ND	0.29 0.29 0.29 0.29 0.29 0.29 0.29	ug/l ug/l ug/l ug/l ug/l ug/l ug/l
11100-14-4	Aroclor 1268	ND	0.29	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	90% 105% 98%		30-150% 30-150% 30-150%

101%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



c

Page 1 of 1

Client Sample ID: 1136011UF

Lab Sample ID:M87915-8Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ng/1	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
			ug/l	1	, - 0, 0,			
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Mercury	< 0.20	0.20	ug/l	1	12/10/09	12/10/09 MA	SW846 7470A ¹	SW846 7470A ³
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ⁴

(1) Instrument QC Batch: MA11275(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14563(4) Prep QC Batch: MP14565

Client Sample ID: 1136012

 Lab Sample ID:
 M87915-9
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41718.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	23.4	1.0	ug/l	
107-06-2	1,2-Dichloroethane	1.5	1.0	ug/l	
75-35-4	1,1-Dichloroethene	4.1	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	60.3	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	4.1	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136012

Lab Sample ID: M87915-9 **Date Sampled:** 12/08/09 Matrix: **Date Received:** 12/08/09 AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	60.5	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

70-130%

76%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ N = Indicates presumptive evidence of a compound



### C

### **Report of Analysis**

Client Sample ID: 1136012

 Lab Sample ID:
 M87915-9
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136012

Lab Sample ID:M87915-9Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35721.D 1 12/19/09 KD 12/14/09 OP20189 GBC1823

Run #2

Initial Volume Final Volume
Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) 0.120 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 88% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136012 Lab Sample ID: M87915-9

**Date Sampled:** 12/08/09 Matrix: AQ - Ground Water **Date Received:** 12/08/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72356.D 1 12/22/09 SL12/15/09 OP20201 GEF3314

Run #2

**Initial Volume Final Volume** 

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5 53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1016 Aroclor 1221 Aroclor 1232 Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND ND ND ND	0.25 0.25 0.25 0.25 0.25 0.25 0.25	ug/l ug/l ug/l ug/l ug/l ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	<b>Run# 2</b>	<b>Limits</b>
877-09-8	Tetrachloro-m-xylene	81%		30-150%
877-09-8	Tetrachloro-m-xylene	102%		30-150%
2051-24-3	Decachlorobiphenyl	103%		30-150%

101%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1136012UF

Lab Sample ID:M87915-10Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	271	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A 3
Cadmium	< 4.0	4.0	ug/l	1	12/10/09		SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

Client Sample ID: 1136010

 Lab Sample ID:
 M87915-11
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File IDDFAnalyzedByPrep DatePrep BatchAnalytical BatchRun #1E41719.D112/15/09SCn/an/aMSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	3.6	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 2 of 3

Client Sample ID: 1136010 Lab Sample ID: M87915-11

Matrix: AQ - Ground Water Method: SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

**Date Sampled:** 12/08/09 **Date Received:** 12/08/09 Percent Solids: n/a

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	4.2	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	17.6	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits

70-130%

74%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 3 of 3

Client Sample ID: 1136010

 Lab Sample ID:
 M87915-11
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	81%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Page 1 of 1

Client Sample ID: 1136010

Lab Sample ID:M87915-11Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35738.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume
Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 89% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1136010

 Lab Sample ID:
 M87915-11
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72357.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limi	its
877-09-8	Tetrachloro-m-xylene	82%		30-1	50%
877-09-8	Tetrachloro-m-xylene	98%		30-1	50%
2051-24-3	Decachlorobiphenyl	72%		30-1	50%
2051-24-3	Decachlorobiphenyl	71%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



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Client Sample ID: 1136010UF

Lab Sample ID:M87915-12Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	365	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

Client Sample ID: 1136007

 Lab Sample ID:
 M87915-13
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41720.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



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Client Sample ID: 1136007

Lab Sample ID:M87915-13Matrix:AQ - Ground WaterMethod:SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

**Date Sampled:** 12/08/09 **Date Received:** 12/08/09 **Percent Solids:** n/a

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1, 1, 1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	ts

1868-53-7 Dibromofluoromethane 75% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 3 of 3

Client Sample ID: 1136007

 Lab Sample ID:
 M87915-13
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	74%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1136007

 Lab Sample ID:
 M87915-13
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35740.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume
Run #1 960 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.083 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 100% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1136007

Lab Sample ID: M87915-13 **Date Sampled:** 12/08/09 Matrix: AQ - Ground Water **Date Received:** 12/08/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72358.D 1 12/22/09 SL12/15/09 OP20201 GEF3314

Run #2

**Initial Volume Final Volume** 

Run #1 960 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q	
12674-11-2	Aroclor 1016	ND	0.26	ug/l	
11104-28-2	Aroclor 1221	ND	0.26	ug/l	
11141-16-5	Aroclor 1232	ND	0.26	ug/l	
53469-21-9	Aroclor 1242	ND	0.26	ug/l	
12672-29-6	Aroclor 1248	ND	0.26	ug/l	
11097-69-1	Aroclor 1254	ND	0.26	ug/l	
11096-82-5	Aroclor 1260	ND	0.26	ug/l	
37324-23-5	Aroclor 1262	ND	0.26	ug/l	
11100-14-4	Aroclor 1268	ND	0.26	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	
877-09-8	Tetrachloro-m-xylene	77%		30-150%	
877-09-8	Tetrachloro-m-xylene	99%		30-150%	
2051-24-3	Decachlorobiphenyl	106%		30-150%	
2051-24-3	Decachlorobiphenyl	109%		30-150%	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 1 of 1

Client Sample ID: 1136007UF

Lab Sample ID:M87915-14Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

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Client Sample ID: 1136008

Lab Sample ID: M87915-15 **Date Sampled:** 12/08/09 Matrix: **Date Received:** 12/08/09 AQ - Ground Water Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed  $\mathbf{B}\mathbf{y}$ Run #1 E41721.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1  $5.0 \; ml$ 

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 2 of 3

Client Sample ID: 1136008

 Lab Sample ID:
 M87915-15
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q	<u>.</u>
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

1868-53-7 Dibromofluoromethane 74% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 3 of 3

Client Sample ID: 1136008

 Lab Sample ID:
 M87915-15
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	78%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



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Page 1 of 1

Client Sample ID: 1136008

 Lab Sample ID:
 M87915-15
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35742.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume

Run #1 950 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.084 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 107% 50-149%

ND = Not detected RL = Reporting Limit

KL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



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Client Sample ID: 1136008

 Lab Sample ID:
 M87915-15
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72359.D 1 12/22/09 SL12/15/09 OP20201 GEF3314 Run #2

Run #1 980 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l
11104-28-2	Aroclor 1221	ND	0.26	ug/l
11141-16-5	Aroclor 1232	ND	0.26	ug/l
53469-21-9	Aroclor 1242	ND	0.26	ug/l
12672-29-6	Aroclor 1248	ND	0.26	ug/l
11097-69-1	Aroclor 1254	ND	0.26	ug/l
11096-82-5	Aroclor 1260	ND	0.26	ug/l
37324-23-5	Aroclor 1262	ND	0.26	ug/l
11100-14-4	Aroclor 1268	ND	0.26	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	75%		30-150%
877-09-8	Tetrachloro-m-xylene	99%		30-150%
2051-24-3	Decachlorobiphenyl	103%		30-150%
2051-24-3	Decachlorobiphenyl	107%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1136008UF

Lab Sample ID:M87915-16Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

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Client Sample ID: 1136009

Lab Sample ID: M87915-17 **Date Sampled:** 12/08/09 Matrix: AQ - Ground Water **Date Received:** 12/08/09 Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed  $\mathbf{B}\mathbf{y}$ Run #1 E41722.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1  $5.0 \; ml$ 

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



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Client Sample ID: 1136009

Lab Sample ID:M87915-17Matrix:AQ - Ground WaterMethod:SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

**Date Sampled:** 12/08/09 **Date Received:** 12/08/09 **Percent Solids:** n/a

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VOA RCP List	t
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CAS No.	Compound	Result	RL	Units Q	)
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

1868-53-7 Dibromofluoromethane 77% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 3 of 3

Client Sample ID: 1136009

 Lab Sample ID:
 M87915-17
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	83%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1136009

 Lab Sample ID:
 M87915-17
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35744.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume

Run #1 930 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.086 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 103% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound

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Client Sample ID: 1136009

 Lab Sample ID:
 M87915-17
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72360.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume

Run #1 950 ml 5.0 ml

Run #2

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.26	ug/l
11104-28-2	Aroclor 1221	ND	0.26	ug/l
11141-16-5	Aroclor 1232	ND	0.26	ug/l
53469-21-9	Aroclor 1242	ND	0.26	ug/l
12672-29-6	Aroclor 1248	ND	0.26	ug/l
11097-69-1	Aroclor 1254	ND	0.26	ug/l
11096-82-5	Aroclor 1260	ND	0.26	ug/l
37324-23-5	Aroclor 1262	ND	0.26	ug/l
11100-14-4	Aroclor 1268	ND	0.26	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	89%		30-150%
877-09-8	Tetrachloro-m-xylene	103%		30-150%
2051-24-3	Decachlorobiphenyl	83%		30-150%
2051-24-3	Decachlorobiphenyl	87%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 1 of 1

Client Sample ID: 1136009UF

Lab Sample ID:M87915-18Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

Project: UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09		SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

Page 1 of 3

Client Sample ID: 1136017

 Lab Sample ID:
 M87915-19
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41723.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Page 2 of 3

Client Sample ID: 1136017

Lab Sample ID: M87915-19 **Date Sampled:** 12/08/09 Matrix: **Date Received:** 12/08/09 AQ - Ground Water Method: Percent Solids: n/a SW846 8260B

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units (	9
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	

1868-53-7 Dibromofluoromethane 78% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 3 of 3

Client Sample ID: 1136017

 Lab Sample ID:
 M87915-19
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	86%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1136017

 Lab Sample ID:
 M87915-19
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35746.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume Run #1 940 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.085 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 101% 50-149%

ND = Not detected RL = Reporting Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Page 1 of 1

Client Sample ID: 1136017

 Lab Sample ID:
 M87915-19
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72361.D 1 12/22/09 SL12/15/09 OP20201 GEF3314 Run #2

Run #1 910 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2 11104-28-2 11141-16-5	Aroclor 1016 Aroclor 1221 Aroclor 1232	ND ND ND	0.27 0.27 0.27	ug/l ug/l ug/l
53469-21-9 12672-29-6 11097-69-1 11096-82-5	Aroclor 1242 Aroclor 1248 Aroclor 1254 Aroclor 1260	ND ND ND ND	0.27 0.27 0.27 0.27	ug/l ug/l ug/l ug/l
37324-23-5 11100-14-4	Aroclor 1262 Aroclor 1268	ND ND	0.27 0.27 0.27	ug/l ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8 877-09-8 2051-24-3	Tetrachloro-m-xylene Tetrachloro-m-xylene Decachlorobiphenyl	65% 84% 53%		30-150% 30-150% 30-150%
2051-24-3	Decachlorobiphenyl	61%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Client Sample ID: 1136015

 Lab Sample ID:
 M87915-20
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File IDDFAnalyzedByPrep DatePrep BatchAnalytical BatchRun #1E41724.D112/16/09SCn/an/aMSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



#### Page 2 of 3

## **Report of Analysis**

 Client Sample ID:
 1136015

 Lab Sample ID:
 M87915-20
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 74% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 3 of 3

Client Sample ID: 1136015

 Lab Sample ID:
 M87915-20
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	79%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1136015

Lab Sample ID: M87915-20 **Date Sampled:** 12/08/09 **Matrix:** AQ - Ground Water **Date Received:** 12/08/09 Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC35748.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

**Initial Volume Final Volume** Run #1 900 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.089 mg/l

CAS No. **Surrogate Recoveries** Run# 1 Run# 2 Limits

1-Chlorooctadecane 3386-33-2 105% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1136015

 Lab Sample ID:
 M87915-20
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72363.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume

Run #1 880 ml 5.0 ml

Run #2

#### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s
877-09-8	Tetrachloro-m-xylene	90%		30-15	0%
877-09-8	Tetrachloro-m-xylene	105%		30-15	0%
2051-24-3	Decachlorobiphenyl	79%		30-15	0%
2051-24-3	Decachlorobiphenyl	86%		30-15	0%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



### Page 1 of 1

# **Report of Analysis**

 Client Sample ID:
 1136015UF

 Lab Sample ID:
 M87915-21

 Matrix:
 AQ - Ground Water

 Date Sampled:
 12/08/09

 Date Received:
 12/08/09

**Percent Solids:** n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

Client Sample ID: 1136016

 Lab Sample ID:
 M87915-22
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41725.D 1 12/16/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value



Page 2 of 3

Client Sample ID: 1136016 Lab Sample ID: M87915-22

Matrix: AQ - Ground Water Method: SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Date Sampled: 12/08/09
Date Received: 12/08/09
Percent Solids: n/a

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	ts

1868-53-7 Dibromofluoromethane 74% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 3 of 3

Client Sample ID: 1136016

 Lab Sample ID:
 M87915-22
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	77%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



C

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Client Sample ID: 1136016

Lab Sample ID:M87915-22Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35749.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume Run #1 1000 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 75% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



C

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Client Sample ID: 1136016

 Lab Sample ID:
 M87915-22
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72364.D 1 12/22/09 SL12/15/09 OP20201 GEF3314 Run #2

Initial Volume Final Volume

Run #1 1000 ml 5.0 ml

Run #2

2051-24-3

### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	95%		30-150%
877-09-8	Tetrachloro-m-xylene	111%		30-150%
2051-24-3	Decachlorobiphenyl	87%		30-150%

95%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Page 1 of 1

Client Sample ID: 1136016UF

Lab Sample ID:M87915-23Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	10.1	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583

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Client Sample ID: 1136027

 Lab Sample ID:
 M87915-24
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41726.D 1 12/16/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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Client Sample ID: 1136027 Lab Sample ID: M87915-24

Matrix: AQ - Ground Water Method: SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

**Date Sampled:** 12/08/09 **Date Received:** 12/08/09 **Percent Solids:** n/a

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units (	9
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	

1868-53-7 Dibromofluoromethane 76% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1136027

 Lab Sample ID:
 M87915-24
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	85%		70-130%
460-00-4	4-Bromofluorobenzene	76%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Page 1 of 1

Client Sample ID: 1136027

 Lab Sample ID:
 M87915-24
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 CT-ETPH 7/06 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35750.D 1 12/21/09 KD 12/15/09 OP20202 GBC1824

Run #2

Initial Volume Final Volume
Run #1 880 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.091 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 73% 50-149%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



Page 1 of 1

Client Sample ID: 1136027

 Lab Sample ID:
 M87915-24
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8082
 SW846 3510C
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 EF72365.D 1 12/22/09 SL 12/15/09 OP20201 GEF3314

Run #2

Initial Volume Final Volume

Run #1 900 ml 5.0 ml

Run #2

### **CT Polychlorinated Biphenyls RCP List**

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.28	ug/l	
11104-28-2	Aroclor 1221	ND	0.28	ug/l	
11141-16-5	Aroclor 1232	ND	0.28	ug/l	
53469-21-9	Aroclor 1242	ND	0.28	ug/l	
12672-29-6	Aroclor 1248	ND	0.28	ug/l	
11097-69-1	Aroclor 1254	ND	0.28	ug/l	
11096-82-5	Aroclor 1260	ND	0.28	ug/l	
37324-23-5	Aroclor 1262	ND	0.28	ug/l	
11100-14-4	Aroclor 1268	ND	0.28	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	its
877-09-8	Tetrachloro-m-xylene	83%		30-1	50%
877-09-8	Tetrachloro-m-xylene	106%		30-1	50%
2051-24-3	Decachlorobiphenyl	92%		30-1	50%
2051-24-3	Decachlorobiphenyl	100%		30-1	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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## **Report of Analysis**

Client Sample ID: 1136027UF Lab Sample ID: M87915-25

**Date Sampled:** 12/08/09 Matrix: **Date Received:** 12/08/09 AQ - Ground Water Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283 (2) Instrument QC Batch: MA11288 (3) Prep QC Batch: MP14565 (4) Prep QC Batch: MP14583

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Client Sample ID: 1136026

 Lab Sample ID:
 M87915-26
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 E41710.D 1 12/15/09 SC n/a n/a MSE1811

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



**Date Sampled:** 12/08/09

**Date Received:** 12/08/09

Percent Solids: n/a

Page 2 of 3

Client Sample ID: 1136026

Lab Sample ID:M87915-26Matrix:AQ - Ground WaterMethod:SW846 8260B

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q	<u>.</u>
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits	

74%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1136026

 Lab Sample ID:
 M87915-26
 Date Sampled:
 12/08/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/08/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	84%		70-130%
460-00-4	4-Bromofluorobenzene	79%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 

N = Indicates presumptive evidence of a compound



C

Page 1 of 1

Client Sample ID: 1136017UF

Lab Sample ID:M87915-27Date Sampled:12/08/09Matrix:AQ - Ground WaterDate Received:12/08/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/12/09	12/14/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/10/09	12/14/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11283(2) Instrument QC Batch: MA11288(3) Prep QC Batch: MP14565(4) Prep QC Batch: MP14583



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



## **Parameter Certification Exceptions**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5		AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4		AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



ACCUTEST: 18 1/3	CHAIN OF CUSTODY  495 TECHNOLOGY CENTER WEST • BUILDING ONE MARLBOROUGH, MA 01752  ACCUTEST JOB 4:  \$\frac{k\beta}{k}	1/ z009 - 453
Laboratories	TEL: 508-481-6200 • FAX: 508-481-7753	M87915
CLIENT INFORMATION	FACILITY INFORMATION ANALYTICAL INFOR	RMATRIX CODES
NAME 100 Mothust Price ADDRESS CITY, STATE ZIP Repin pukingly	PROJECT NAME  PROJECT NAME  LOCATION  JSUT 90 7.001  PROJECT NO.	DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SL - SLUDGE OI - OIL
SEND REPORT TO: PHONE # 860 - 410 - 3000	FAX#	LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST	COLLECTION × PRESERVATION	SOLID
SAMPLE # FIELD ID / POINT OF COLLECTION	DATE TIME SAMPLED BY: PRESERVATION DE LE SAMPLED BY: PRESERVAT	LAB USE ONLY
-1 1/36013	12/9/09 1255 K5D GW 3X X X	
1136013		
-2 1136013UF		
-7 1136028		
113608		
-4 1/36078st		
		<del>                                      </del>
-5 1136014	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	++++
		++++
-6 1156014JF		100.00
		19A,GD,
		205
DATA TURNAROUND INFORMATION	DATA DELIVERABLE INFORMATION COMME	ENTS/REMARKS
	□ DISK DELIVERABLE □ STATE FORMS □ OTHER (SPECIFY)	
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RECEIVED 5. DATE TIME: RECEIVED 5.		ON ICE TEMPERATURE

M87915: Chain of Custody Page 1 of 5



ACCUTEST: 2 of u	495 TECHNOL	OF CUSTO LOGY CENTER WEST • BUILDING MARLBOROUGH, MA 01752		ACCUTEST JOB #:  ACCUTEST QUOTE #:	0.76.
Laboratories   CLIENT INFORMATION		08-481-6200 • FAX: 508-481-7753		KBZ 7009-453	M87915
NAME  LOS 244 Lest Dine  ADDRESS  CITY, STATE ZIP  SEND REPORTITO: PHONE # Edin Holuman (LEA)	Willow Brocks PROJECT NAME PSWELST H LOCATION PROJECT NO.	Pand Grandwites redero, CT	<b>.</b>	makhar C. N. B.	DW - DRINKING WATER GW - GROUND WATER WW - WASTE WATER SO - SOIL SI - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST	COLLECTION		ON J Y	3 3	SOLID
SAMPLE # FIELD ID / POINT OF COLLECTION	DATE TIME	SAMPLED BY:	圆为只		LAB USE ONLY
-7 1136011	12.8.09 1100	AC. GWZX	xx		
1136011	1100	4 1 4	x x x	x I	
-8 1136011vP	1 1100	MIIX	x	X	
-9 1136017	1310	ZX	хX		
113602	1310	17/4	x x x		
-10 1136015 VE	1310		x	X	
-// 1136010	1515	2 X	xx		_
11 1136010	1515	V V 4	$x \times x$		
-12 11360104	17.8.09 1515	re au x	х	X	
			<del>-                                    </del>		
DATA TURNAROUND INFORMATION	DATA DEL	VERABLE INFORMATION		COMMENTS/REMARKS	
☐ 14 DAYS STANDARD APPROVED BY: ☐ 7 DAYS AUSH ☐ 48/HOUR EMERGENCY ☐ OTHER ☐ 14 DAY TURNARGUND HARDCOPY. EMERGENCY OR RUSH IS FAX DATA UNLESS PREY/DUSLY AFPROVED	STANDARD COMMERCIAL 'B DISK DELIVERAB STATE FORMS OTHER (SPECIFY	LE	Pass.	2 CT PCP and fried list Rocce provide DCP v	sport.
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M87915: Chain of Custody Page 2 of 5



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	aboratorie
	CLIENT INFORMATION
	LEA
MARKE	

ACCUTEST JOB #:

K B 2/ 2.009 ~ 453

ACCUTEST QUOTE #:

	Laborat	ories			TEL: 50	08-481-62	00 • F	AX: £	08-4	81-7	753											M87915	
	CLIENT INFO	RMATION		FACILITY INFORMATION								AN	ALYT	ICAL	INFO	DRMA	ION			MATRIX CODES			
NAME 100 Nort ADDRESS Pla, pv, /// CITY, SEND REPORT TO PHONE # ACCUTEST	Robin 1	Mc Kinney	OGZ ZIP	PROJECT   PROJECT   PROJECT   FAX #	llowpor etford,	≥   # PRESERVATION				ON	5 4760B	ETPH	2,80% 5	3							DW - DRINKING WATER GW - GROUND WATER WATER WATER SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER SOLID		
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-10-	136004			12/4/09	11:20	CSB	60	4				х		*	+								
/3	136008			12/8/09	11:20	L5/3	60	Z	X	$\perp$	Ш	×	×									_	
-/6	1136008 Uf			12/4/09	11:20	LSB	Gu	١	Ц	×	1	×	L			×		_				_	
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M87915: Chain of Custody Page 3 of 5



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	CLIENT INFO					ILITY INFO	_						V (S) X	1 AN	ALYT	ICAL	INFOR	MATION	100000	MATRIX CODES
ADDRESS P	LEA Northu lainuille Robin Mo	xest Dr	GOG Z ZIP	PROJECT LOCATION PROJECT FAX #	NAME Eas		- N	loni )	N 5.32	ካჭ-			<b>7</b> 1	Bs	ETPH	8				DW - DRINKING WATER GW - GROUND WATER WW - WASTE WASTE SO - SOIL SL - SLUDGE OI - OIL LIQ - OTHER LIQUID SOL - OTHER
ACCUTEST				Ç	LLECTION		¥	LES T	PR	ESER	VATIO	<u> </u>	3	Z	5					SOLID
SAMPLE #	FIELD ID / Po	DINT OF COLLECT	TON	DATE	TIME	SAMPLED BY:	MATRIX	# OF BOTTLES	Ξ	S S S	HONE 42804	씱	MALL		၂					LAB USE ONLY
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-01						+	H	6	2	+'+	4	6 x	+	X	X	+	_		+	<u> </u>
-22 -33	1136010			-	15:05	+	+-	1	Ĥ	+-	17	7	\x	1		+	+		++-	
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## 4

### **Accutest Laboratories Sample Receipt Summary**

ACCUTEST.

Accutest Laboratories

V:508.481.6200

Accutest Job Number: M87915 Client: LEA Immediate Client Services Action Required: Nο Date / Time Received: 12/8/2009 6:30:00 PM Client Service Action Required at Login: Nο No. Coolers: Project: UTC PW WILLGOOS Airbill #'s: N/A Cooler Security Y or Y or N Y or N **Sample Integrity - Documentation** Ν 3. COC Present: V **v** 1. Custody Seals Present: 1 1. Sample labels present on bottles: 4. Smpl Dates/Time OK V ✓ 2. Custody Seals Intact: ✓ 2. Container labeling complete: 3. Sample container label / COC agree: ✓ Cooler Temperature Y or N 1. Temp criteria achieved: ✓ Y or N Sample Integrity - Condition Infared gun 2. Cooler temp verification: **✓** 1. Sample recvd within HT: 3. Cooler media: Ice (bag) **✓** 2. All containers accounted for: 3. Condition of sample: Intact **Quality Control Preservation** Y or N N/A 1. Trip Blank present / cooler: ✓ Sample Integrity - Instructions Y or N N/A **✓** 2. Trip Blank listed on COC: 1. Analysis requested is clear: ✓ 3. Samples preserved properly: **✓** 2. Bottles received for unspecified tests • 4. VOCs headspace free: **✓** 3. Sufficient volume rec'd for analysis: **✓** 4. Compositing instructions clear: ✓ 5. Filtering instructions clear: ✓ Comments

> 495 Technology Center West, Bldg One F: 508.481.7753

> > M87915: Chain of Custody Page 5 of 5

Marlborough, MA



### **Reasonable Confidence Protocol Laboratory Analysis QA/QC Certification Form**

**Laboratory Name: Accutest New England** Client: Loureiro Eng. Associates

**Project Location:** UTC: 2009 Quarterly GW-Willow Pond **Project Number:** 88UT907

CT-ETPH 7/06, SW846 6010B, SW846 7470A, SW846 8082, SW846 8260B

Sampling Date(s): 12/8/2009

Methods:

M87915-1, M87915-2, M87915-3, M87915-4, M87915-5, M87915-6, M87915-7, M87915-8, Laboratory Sample ID(s):

M87915-9, M87915-10, M87915-11, M87915-12, M87915-13, M87915-14, M87915-15, M87915-16, M87915-17, M87915-18, M87915-19, M87915-20, M87915-21, M87915-22,

Yes 🔽

No 🗖

M87915-23, M87915-24, M87915-25, M87915-26, M87915-27

1	For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-specific Reasonable Confidence Protocol documents)?	Yes	<u></u>	No	□
1A	Where all the method specified preservation and holding time requirements met?	Yes	☑	No	
1B	VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods)	Yes	_	No ✓	
2	Were all samples received by the laboratory in a condition consistent with that described on the associated chain-of-custody document(s)?	Yes	☑	No	□
3	Were samples received at an appropriate temperature (<6° C)?	Yes		No	
4	Were all QA/QC performance criteria specified in the CTDEP Reasonable Confidence Protocol documents achieved?	Yes	□	No	☑
5	a) Were reporting limits specified or referenced on the chain-of-custody?	Yes		No	
	b) Were these reporting limits met?	Yes		No	☑
6	For each analytical method referenced in this laboratory report package, were results reported for all constituents identified in the method-specific analyte lists presented in the Reasonable Confidence Protocol documents?	Yes		No	v

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

Are project-specific matrix spikes and laboratory duplicates included in this

I, the undersigned, attest under pains and penalties of perjury that, to the best of my knowledge and belie
and based upon my personal inquiry of those responsible for providing the information contained in this
analytical report, such information is accurate and complete.

Authorized

Signature: Position: Lab Director

12/23/2009 Printed Name: Reza Tand Date:

Accutest New England

data set?



Loureiro Eng. Associates

M87915 Job No:

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M87915-1 1136013	Collected: 08-DEC-09	12:55 By: RJD	Receiv	ed: 08-DEC	-09 By	: ЈВ
M87915-1	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 17:57 19-DEC-09 19:36 22-DEC-09 03:26	KD	14-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-2 1136013UF	Collected: 08-DEC-09	12:55 By: RJD	Receiv	red: 08-DEC-	-09 By	: JB
	SW846 7470A SW846 6010B	10-DEC-09 15:32 14-DEC-09 13:32		10-DEC-09 10-DEC-09		HG AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M87915-3 1136028	Collected: 08-DEC-09	12:55 By: RJD	Receiv	red: 08-DEC-	-09 By	: ЈВ
M87915-3	CT-ETPH 7/06 SW846 8260B SW846 8082	19-DEC-09 20:16 21-DEC-09 20:10 22-DEC-09 04:10	SC	14-DEC-09 15-DEC-09		BCTTPH V8260RCP P8082RCP
M87915-4 1136028UF	Collected: 08-DEC-09	12:55 By: RJD	Receiv	red: 08-DEC	-09 By	: JB
	SW846 7470A SW846 6010B	10-DEC-09 15:34 14-DEC-09 13:36		10-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M87915-5 1136014	Collected: 08-DEC-09	15:20 By: RJD	Receiv	red: 08-DEC-	-09 By	: ЈВ
M87915-5	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 20:16 19-DEC-09 20:55 22-DEC-09 04:40	KD	14-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-6 1136014UF	Collected: 08-DEC-09	15:20 By: RJD	Receiv	red: 08-DEC-	-09 By	: JB
M87915-6	SW846 7470A	10-DEC-09 15:37	MA	10-DEC-09	MA	HG



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M87915

Job No:

## **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M87915-6	SW846 6010B	14-DEC-09 13:41	PY	10-DEC-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M87915-7 1136011	Collected: 08-DEC-09	11:00 By: RJD	Receiv	ved: 08-DEC	-09 By	: JB
M87915-7	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 20:49 19-DEC-09 21:34 22-DEC-09 05:24		14-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-8 1136011UF	Collected: 08-DEC-09	11:00 By: RJD	Receiv	ved: 08-DEC	-09 By	: JB
	SW846 7470A SW846 6010B	10-DEC-09 15:39 14-DEC-09 13:45		10-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M87915-9 1136012	Collected: 08-DEC-09	13:10 By: RJD	Receiv	ved: 08-DEC	-09 By	: JB
M87915-9	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 21:17 19-DEC-09 22:13 22-DEC-09 05:54		14-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-10 1136012UF	Collected: 08-DEC-09	13:10 By: RJD	Receiv	ved: 08-DEC	-09 By	: JB
M87915-10	SW846 6010B	14-DEC-09 13:10	PY	10-DEC-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, SE ZN
M87915-10	SW846 7470A	14-DEC-09 13:18	MA	12-DEC-09	MA	HG
M87915-11 1136010	Collected: 08-DEC-09	15:15 By: RJD	Receiv	ved: 08-DEC	-09 By	: JB
M87915-11	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 21:45 21-DEC-09 18:06 22-DEC-09 06:38	SC KD SL	15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP



Loureiro Eng. Associates

Job No: M87915

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M87915-12 1136010UF	Collected: 08-DEC-09	15:15 By: RJD	Receiv	red: 08-DEC-	-09 By:	JB
	SW846 7470A SW846 6010B	14-DEC-09 13:26 14-DEC-09 13:50		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M87915-13 1136007	Collected: 08-DEC-09	09:50 By: RJD	Receiv	red: 08-DEC-	-09 By:	JB
M87915-13	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 22:09 21-DEC-09 18:45 22-DEC-09 07:08	KD	15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-14 1136007UF	Collected: 08-DEC-09	09:50 By: RJD	Receiv	ed: 08-DEC	-09 By:	JB
	SW846 7470A SW846 6010B	14-DEC-09 13:28 14-DEC-09 13:54		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,CU,NI,PB,SE ZN
M87915-15 1136008	Collected: 08-DEC-09	11:20 By: RJD	Receiv	red: 08-DEC-	-09 By:	JB
M87915-15	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 22:38 21-DEC-09 19:25 22-DEC-09 07:52	KD	15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-16 1136008UF	Collected: 08-DEC-09	11:20 By: RJD	Receiv	red: 08-DEC-	-09 By:	JB
	SW846 7470A SW846 6010B	14-DEC-09 13:31 14-DEC-09 13:58		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,PB,SE
M87915-17 1136009	Collected: 08-DEC-09	13:00 By: RJD	Receiv	red: 08-DEC-	-09 By:	JB
	SW846 8260B CT-ETPH 7/06	15-DEC-09 23:06 21-DEC-09 20:04		15-DEC-09	FG	V8260RCP BCTTPH



Loureiro Eng. Associates

Job No: M87915

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M87915-17	SW846 8082	22-DEC-09 08:22	SL	15-DEC-09	FG	P8082RCP
M87915-18 1136009UF	Collected: 08-DEC-09	13:00 By: RJD	Receiv	ved: 08-DEC-	-09 By	: JB
	SW846 7470A SW846 6010B	14-DEC-09 13:33 14-DEC-09 14:03		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,PB,SE
M87915-19 1136017	Collected: 08-DEC-09	15:00 By: RJD	Receiv	ved: 08-DEC-	-09 By	: JB
M87915-19	SW846 8260B CT-ETPH 7/06 SW846 8082	15-DEC-09 23:35 21-DEC-09 20:44 22-DEC-09 09:10	KD	15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-20 1136015	Collected: 08-DEC-09	13:00 By: RJD	Receiv	ved: 08-DEC-	-09 By	: JB
M87915-20	SW846 8260B CT-ETPH 7/06 SW846 8082	16-DEC-09 00:04 21-DEC-09 22:02 22-DEC-09 10:15	KD	15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-21 1136015UF	Collected: 08-DEC-09	13:00 By: RJD	Receiv	ved: 08-DEC-	-09 By	: JB
	SW846 7470A SW846 6010B	14-DEC-09 13:35 14-DEC-09 14:07		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,PB,SE
M87915-22 1136016	Collected: 08-DEC-09	15:05 By: RJD	Receiv	ved: 08-DEC-	-09 By	: JB
M87915-22	SW846 8260B CT-ETPH 7/06 SW846 8082	16-DEC-09 00:33 21-DEC-09 22:41 22-DEC-09 10:50	KD	15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-23 1136016UF	Collected: 08-DEC-09	15:05 By: RJD	Receiv	ved: 08-DEC-	-09 By	: ЈВ
	SW846 7470A SW846 6010B	14-DEC-09 13:37 14-DEC-09 14:20		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,PB,SE



Loureiro Eng. Associates

M87915 Job No: UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M87915-24 1136027	Collected: 08-DEC-09	15:50 By: RJD	Receiv	red: 08-DEC-	-09 By	: JB
M87915-24	SW846 8260B CT-ETPH 7/06 SW846 8082	16-DEC-09 01:02 21-DEC-09 23:20 22-DEC-09 12:04		15-DEC-09 15-DEC-09		V8260RCP BCTTPH P8082RCP
M87915-25 1136027UF	Collected: 08-DEC-09	15:50 By: RJD	Receiv	ed: 08-DEC	-09 By	: JB
	SW846 7470A SW846 6010B	14-DEC-09 13:40 14-DEC-09 14:25				HG AG,AS,BA,CD,CR,PB,SE
M87915-26 1136026	Collected: 08-DEC-09	10:00 By: RJD	Receiv	ed: 08-DEC	-09 By	: JB
M87915-26	SW846 8260B	15-DEC-09 17:28	SC			V8260RCP
M87915-27 1136017UF	Collected: 08-DEC-09	15:00 By: RJD	Receiv	ed: 08-DEC	-09 By	: JB
	SW846 7470A SW846 6010B	14-DEC-09 13:42 14-DEC-09 14:29		12-DEC-09 10-DEC-09		HG AG,AS,BA,CD,CR,PB,SE





## GC/MS Volatiles

## QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



## **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	Analytical Batch
MSE1811-MB	E41709.D	1	12/15/09	SC	n/a	n/a	MSE1811

### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



## **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
MSE1811-MB	E41709.D	1	12/15/09	SC	n/a	n/a	MSE1811

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



## **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample MSE1811-MB	<b>File ID</b> E41709.D	<b>DF</b> 1	<b>Analyzed</b> 12/15/09	By SC	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch MSE1811

### The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries		Limits
	Dibromofluoromethane	77%	70-130%
2037-26-5	Toluene-D8	85%	70-130%
460-00-4	4-Bromofluorobenzene	79%	70-130%



## **Method Blank Summary**

Job Number: M87915

**Account:** LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	<b>Analytical Batch</b>
MSE1814-MB	E41809.D	1	12/21/09	SC	n/a	n/a	MSE1814

The QC reported here applies to the following samples:

M87915-3

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



# Method Blank Summary Job Number: M87915

LEA Loureiro Eng. Associates Account:

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	<b>Analytical Batch</b>
MSE1814-MB	E41809.D	1	12/21/09	SC	n/a	n/a	MSE1814

The QC reported here applies to the following samples:

M87915-3

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



## **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample MSE1814-MB	<b>File ID</b> E41809.D	<b>DF</b> 1	<b>Analyzed</b> 12/21/09	By SC	<b>Prep Date</b> n/a	<b>Prep Batch</b> n/a	Analytical Batch MSE1814

The QC reported here applies to the following samples:

M87915-3

CAS No.	Surrogate Recoveries		Limits
1868-53-7	Dibromofluoromethane	96%	70-130%
2037-26-5	Toluene-D8	106%	70-130%
460-00-4	4-Bromofluorobenzene	94%	70-130%



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**Method:** SW846 8260B

## Blank Spike/Blank Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSE1811-BS	E41707.D	1	12/15/09	SC	n/a	n/a	MSE1811
MSE1811-BSD	E41708.D	1	12/15/09	SC	n/a	n/a	MSE1811

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	60.1	120	60.0	120	0	70-130/25
107-13-1	Acrylonitrile	250	186	74	192	77	3	70-130/25
71-43-2	Benzene	50	42.6	85	43.8	88	3	70-130/25
108-86-1	Bromobenzene	50	49.9	100	51.8	104	4	70-130/25
75-27-4	Bromodichloromethane	50	45.7	91	45.8	92	0	70-130/25
75-25-2	Bromoform	50	55.7	111	59.7	119	7	70-130/25
74-83-9	Bromomethane	50	38.1	76	40.6	81	6	70-130/25
78-93-3	2-Butanone (MEK)	50	45.8	92	48.1	96	5	70-130/25
104-51-8	n-Butylbenzene	50	44.8	90	45.8	92	2	70-130/25
135-98-8	sec-Butylbenzene	50	50.2	100	51.8	104	3	70-130/25
98-06-6	tert-Butylbenzene	50	51.5	103	52.7	105	2	70-130/25
75-15-0	Carbon disulfide	50	36.6	73	37.8	76	3	70-130/25
56-23-5	Carbon tetrachloride	50	51.8	104	53.9	108	4	70-130/25
108-90-7	Chlorobenzene	50	52.6	105	53.6	107	2	70-130/25
75-00-3	Chloroethane	50	33.4	67* a	35.9	72	7	70-130/25
67-66-3	Chloroform	50	41.3	83	43.3	87	5	70-130/25
74-87-3	Chloromethane	50	32.0	64* a	32.9	66* a	3	70-130/25
95-49-8	o-Chlorotoluene	50	51.0	102	51.5	103	1	70-130/25
106-43-4	p-Chlorotoluene	50	52.3	105	53.3	107	2	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	43.0	86	43.8	88	2	70-130/25
124-48-1	Dibromochloromethane	50	54.1	108	56.8	114	5	70-130/25
106-93-4	1,2-Dibromoethane	50	51.9	104	55.0	110	6	70-130/25
95-50-1	1,2-Dichlorobenzene	50	44.8	90	45.8	92	2	70-130/25
541-73-1	1,3-Dichlorobenzene	50	50.2	100	51.5	103	3	70-130/25
106-46-7	1,4-Dichlorobenzene	50	49.8	100	51.5	103	3	70-130/25
75-71-8	Dichlorodifluoromethane	50	38.8	78	40.4	81	4	70-130/25
75-34-3	1,1-Dichloroethane	50	36.7	73	38.5	77	5	70-130/25
107-06-2	1,2-Dichloroethane	50	49.2	98	49.9	100	1	70-130/25
75-35-4	1,1-Dichloroethene	50	38.1	76	40.4	81	6	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	36.8	74	37.9	76	3	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	38.2	76	39.5	79	3	70-130/25
78-87-5	1,2-Dichloropropane	50	40.2	80	41.1	82	2	70-130/25
142-28-9	1,3-Dichloropropane	50	48.4	97	50.0	100	3	70-130/25
594-20-7	2,2-Dichloropropane	50	41.9	84	43.9	88	5	70-130/25
563-58-6	1,1-Dichloropropene	50	45.8	92	47.1	94	3	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	44.6	89	46.5	93	4	70-130/25



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**Method:** SW846 8260B

## Blank Spike/Blank Spike Duplicate Summary

Job Number: M87915

**Account:** LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSE1811-BS	E41707.D	1	12/15/09	SC	n/a	n/a	MSE1811
MSE1811-BSD	E41708.D	1	12/15/09	SC	n/a	n/a	MSE1811

### The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	50.3	101	50.8	102	1	70-130/25
10001-02-0	Ethylbenzene	50	49.5	99	52.1	104	5	70-130/25
76-13-1	Freon 113	50	44.8	90	46.3	93	3	70-130/25
87-68-3	Hexachlorobutadiene	50	38.5	77	40.5	81	5	70-130/25
591-78-6	2-Hexanone	50	57.3	115	67.2	134* a	16	70-130/25
98-82-8	Isopropylbenzene	50	60.3	121	61.9	124	3	70-130/25
99-87-6	p-Isopropyltoluene	50	51.7	103	52.7	105	2	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	38.9	78	41.7	83	7	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)		43.0	86	44.5	89	3	70-130/25
74-95-3	Methylene bromide	50	48.0	96	50.7	101	5	70-130/25
75-09-2	Methylene chloride	50	36.7	73	38.5	77	5	70-130/25
91-20-3	Naphthalene	50	44.9	90	49.6	99	10	70-130/25
103-65-1	n-Propylbenzene	50	52.6	105	52.6	105	0	70-130/25
100-42-5	Styrene	50	50.4	101	53.2	106	5	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	55.3	111	56.6	113	2	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	48.9	98	49.6	99	1	70-130/25
127-18-4	Tetrachloroethene	50	57.0	114	59.9	120	5	70-130/25
109-99-9	Tetrahydrofuran	50	37.8	76	38.3	77	1	70-130/25
108-88-3	Toluene	50	46.6	93	47.4	95	2	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	54.8	110	56.7	113	3	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	45.6	91	49.6	99	8	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	43.4	87	45.9	92	6	70-130/25
71-55-6	1,1,1-Trichloroethane	50	43.5	87	45.4	91	4	70-130/25
79-00-5	1,1,2-Trichloroethane	50	46.7	93	47.2	94	1	70-130/25
79-01-6	Trichloroethene	50	46.1	92	45.9	92	0	70-130/25
75-69-4	Trichlorofluoromethane	50	40.1	80	43.4	87	8	70-130/25
96-18-4	1,2,3-Trichloropropane	50	41.3	83	44.3	89	7	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	50.6	101	52.0	104	3	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	51.0	102	52.2	104	2	70-130/25
75-01-4	Vinyl chloride	50	36.2	72	39.1	78	8	70-130/25
	m,p-Xylene	100	99.7	100	105	105	5	70-130/25
95-47-6	o-Xylene	50	51.3	103	52.6	105	3	70-130/25



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**Method:** SW846 8260B

## Blank Spike/Blank Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample MSE1811-BS MSE1811-BSD	<b>File ID</b> E41707.D E41708.D	<b>DF</b> 1 1	<b>Analyzed</b> 12/15/09 12/15/09	By SC SC	Prep Date n/a n/a	Prep Batch n/a n/a	Analytical Batch MSE1811 MSE1811
NASETOTT ESE	E11700.B	•	12/13/07	se	II u	II/ U	Widelight

#### The QC reported here applies to the following samples:

M87915-1, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24, M87915-26

CAS No.	<b>Surrogate Recoveries</b>	BSP	BSD	Limits
	Dibromofluoromethane Toluene-D8	75% 85%	75% 82%	70-130% 70-130%
460-00-4	4-Bromofluorobenzene	82%	80%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
MSE1814-BS	E41807.D	1	12/21/09	SC	n/a	n/a	MSE1814
MSE1814-BSD	E41808.D	1	12/21/09	SC	n/a	n/a	MSE1814

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
	•	Ü			J			
67-64-1	Acetone	50	75.6	151* a	73.7	147* a	3	70-130/25
107-13-1	Acrylonitrile	250	257	103	266	106	3	70-130/25
71-43-2	Benzene	50	51.5	103	52.5	105	2	70-130/25
108-86-1	Bromobenzene	50	55.7	111	56.4	113	1	70-130/25
75-27-4	Bromodichloromethane	50	51.3	103	50.7	101	1	70-130/25
75-25-2	Bromoform	50	50.1	100	48.8	98	3	70-130/25
74-83-9	Bromomethane	50	37.8	76	48.5	97	25	70-130/25
78-93-3	2-Butanone (MEK)	50	65.6	131* b	59.2	118	10	70-130/25
104-51-8	n-Butylbenzene	50	48.5	97	47.0	94	3	70-130/25
135-98-8	sec-Butylbenzene	50	56.3	113	54.4	109	3	70-130/25
98-06-6	tert-Butylbenzene	50	54.9	110	54.5	109	1	70-130/25
75-15-0	Carbon disulfide	50	50.2	100	50.4	101	0	70-130/25
56-23-5	Carbon tetrachloride	50	52.2	104	54.2	108	4	70-130/25
108-90-7	Chlorobenzene	50	54.7	109	54.8	110	0	70-130/25
75-00-3	Chloroethane	50	46.6	93	48.6	97	4	70-130/25
67-66-3	Chloroform	50	53.4	107	54.6	109	2	70-130/25
74-87-3	Chloromethane	50	45.4	91	46.3	93	2	70-130/25
95-49-8	o-Chlorotoluene	50	56.5	113	57.0	114	1	70-130/25
106-43-4	p-Chlorotoluene	50	53.9	108	54.1	108	0	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	49.5	99	50.8	102	3	70-130/25
124-48-1	Dibromochloromethane	50	48.5	97	50.1	100	3	70-130/25
106-93-4	1,2-Dibromoethane	50	55.6	111	55.5	111	0	70-130/25
95-50-1	1,2-Dichlorobenzene	50	42.4	85	42.5	85	0	70-130/25
541-73-1	1,3-Dichlorobenzene	50	52.0	104	51.2	102	2	70-130/25
106-46-7	1,4-Dichlorobenzene	50	53.5	107	53.8	108	1	70-130/25
75-71-8	Dichlorodifluoromethane	50	37.4	75	37.2	74	1	70-130/25
75-34-3	1,1-Dichloroethane	50	51.1	102	52.7	105	3	70-130/25
107-06-2	1,2-Dichloroethane	50	52.1	104	54.8	110	5	70-130/25
75-35-4	1,1-Dichloroethene	50	46.4	93	47.4	95	2	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	50.8	102	51.8	104	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	48.4	97	47.6	95	2	70-130/25
78-87-5	1,2-Dichloropropane	50	49.7	99	51.3	103	3	70-130/25
142-28-9	1,3-Dichloropropane	50	54.6	109	53.5	107	2	70-130/25
594-20-7	2,2-Dichloropropane	50	57.2	114	59.9	120	5	70-130/25
563-58-6	1,1-Dichloropropene	50	56.3	113	53.5	107	5	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	54.6	109	57.2	114	5	70-130/25



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**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
MSE1814-BS	E41807.D	1	12/21/09	SC	n/a	n/a	MSE1814
MSE1814-BSD	E41808.D	1	12/21/09	SC	n/a	n/a	MSE1814

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	60.5	121	63.3	127	5	70-130/25
100-41-4	Ethylbenzene	50	55.9	112	55.1	110	1	70-130/25
76-13-1	Freon 113	50	61.9	124	61.8	124	0	70-130/25
87-68-3	Hexachlorobutadiene	50	44.5	89	41.9	84	6	70-130/25
591-78-6	2-Hexanone	50	73.1	146* b	68.3	137* b	7	70-130/25
98-82-8	Isopropylbenzene	50	58.1	116	56.7	113	2	70-130/25
99-87-6	p-Isopropyltoluene	50	55.9	112	54.6	109	2	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	52.5	105	54.2	108	3	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	55.0	110	55.2	110	0	70-130/25
74-95-3	Methylene bromide	50	54.4	109	54.1	108	1	70-130/25
75-09-2	Methylene chloride	50	50.9	102	51.8	104	2	70-130/25
91-20-3	Naphthalene	50	57.1	114	61.0	122	7	70-130/25
103-65-1	n-Propylbenzene	50	57.7	115	56.5	113	2	70-130/25
100-42-5	Styrene	50	54.3	109	58.2	116	7	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	54.3	109	55.9	112	3	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	57.1	114	56.7	113	1	70-130/25
127-18-4	Tetrachloroethene	50	51.6	103	50.7	101	2	70-130/25
109-99-9	Tetrahydrofuran	50	51.6	103	53.3	107	3	70-130/25
108-88-3	Toluene	50	56.7	113	56.0	112	1	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	51.4	103	49.9	100	3	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	55.7	111	58.7	117	5	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	47.4	95	47.0	94	1	70-130/25
71-55-6	1,1,1-Trichloroethane	50	53.6	107	54.9	110	2	70-130/25
79-00-5	1,1,2-Trichloroethane	50	53.6	107	57.2	114	6	70-130/25
79-01-6	Trichloroethene	50	51.9	104	54.8	110	5	70-130/25
75-69-4	Trichlorofluoromethane	50	50.5	101	51.5	103	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	53.6	107	53.2	106	1	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	54.8	110	54.8	110	0	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	57.3	115	56.2	112	2	70-130/25
75-01-4	Vinyl chloride	50	46.4	93	45.9	92	1	70-130/25
	m,p-Xylene	100	118	118	115	115	3	70-130/25
95-47-6	o-Xylene	50	53.0	106	53.8	108	1	70-130/25



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**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSE1814-BS	E41807.D	1	12/21/09	SC	n/a	n/a	MSE1814
MSE1814-BSD	E41808.D	1	12/21/09	SC	n/a	n/a	MSE1814

#### The QC reported here applies to the following samples:

CAS No.	Surrogate Recoveries	BSP	BSD	Limits
1868-53-7	Dibromofluoromethane	92%	92%	70-130%
2037-26-5	Toluene-D8	104%	106%	70-130%
460-00-4	4-Bromofluorobenzene	96%	94%	70-130%

- (a) Outside control limits. Blank Spike meets program technical requirements.
- (b) Outside control limits. Associated samples are non-detect for this compound.



**Method:** SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M87915-1MS	E41712.D	5	12/15/09	SC	n/a	n/a	MSE1811
M87915-1MSD	E41713.D	5	12/15/09	SC	n/a	n/a	MSE1811
M87915-1	E41711.D	1	12/15/09	SC	n/a	n/a	MSE1811

The QC reported here applies to the following samples:

M87915-1, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24, M87915-26

CAS No.	Compound	M87915-1 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	117	47* a	113	45* a	3	70-130/30
107-13-1	Acrylonitrile	ND	1250	840	67* a	847	68* a	1	70-130/30
71-43-2	Benzene	0.56	250	213	85	218	87	2	70-130/30
108-86-1	Bromobenzene	ND	250	260	104	262	105	1	70-130/30
75-27-4	Bromodichloromethane	ND	250	225	90	223	89	1	70-130/30
75-25-2	Bromoform	ND	250	221	88	226	90	2	70-130/30
74-83-9	Bromomethane	ND	250	201	80	187	75	7	70-130/30
78-93-3	2-Butanone (MEK)	ND	250	132	53* a	137	55* a	4	70-130/30
104-51-8	n-Butylbenzene	ND	250	233	93	238	95	2	70-130/30
135-98-8	sec-Butylbenzene	ND	250	264	106	268	107	2	70-130/30
98-06-6	tert-Butylbenzene	ND	250	269	108	271	108	1	70-130/30
75-15-0	Carbon disulfide	ND	250	171	68* a	172	69* a	1	70-130/30
56-23-5	Carbon tetrachloride	ND	250	257	103	269	108	5	70-130/30
108-90-7	Chlorobenzene	ND	250	268	107	275	110	3	70-130/30
75-00-3	Chloroethane	4.3	250	176	69* b	173	67* b	2	70-130/30
67-66-3	Chloroform	ND	250	215	86	215	86	0	70-130/30
74-87-3	Chloromethane	0.73	250	161	64* b	155	62* b	4	70-130/30
95-49-8	o-Chlorotoluene	ND	250	267	107	265	106	1	70-130/30
106-43-4	p-Chlorotoluene	ND	250	269	108	275	110	2	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane	ND	250	214	86	230	92	7	70-130/30
124-48-1	Dibromochloromethane	ND	250	239	96	247	99	3	70-130/30
106-93-4	1,2-Dibromoethane	ND	250	263	105	277	111	5	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	232	93	237	95	2	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	264	106	264	106	0	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	266	106	273	109	3	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	198	79	189	76	5	70-130/30
75-34-3	1,1-Dichloroethane	3.5	250	196	77	198	78	1	70-130/30
107-06-2	1,2-Dichloroethane	1.2	250	254	101	252	100	1	70-130/30
75-35-4	1,1-Dichloroethene	10	250	207	79	203	77	2	70-130/30
156-59-2	cis-1,2-Dichloroethene	10.7	250	200	76	198	75	1	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	199	80	191	76	4	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	206	82	207	83	0	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	250	100	259	104	4	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	229	92	218	87	5	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	233	93	233	93	0	70-130/30
10061-01-5	cis-1,3-Dichloropropene	ND	250	221	88	229	92	4	70-130/30



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**Method:** SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

**Account:** LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M87915-1MS	E41712.D	5	12/15/09	SC	n/a	n/a	MSE1811
M87915-1MSD	E41713.D	5	12/15/09	SC	n/a	n/a	MSE1811
M87915-1	E41711.D	1	12/15/09	SC	n/a	n/a	MSE1811

The QC reported here applies to the following samples:

M87915-1, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-24, M87915-26

CAS No.	Compound	M87915-1 ug/l	1 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND		250	253	101	241	96	5	70-130/30
100-41-4	Ethylbenzene	ND		250	257	103	262	105	2	70-130/30
76-13-1	Freon 113	ND		250	234	94	219	88	7	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	207	83	215	86	4	70-130/30
591-78-6	2-Hexanone	ND		250	216	86	209	84	3	70-130/30
98-82-8	Isopropylbenzene	ND		250	314	126	316	126	1	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	271	108	271	108	0	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	207	83	201	80	3	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)			250	210	84	206	82	2	70-130/30
74-95-3	Methylene bromide	ND		250	245	98	240	96	2	70-130/30
75-09-2	Methylene chloride	ND		250	198	79	189	76	5	70-130/30
91-20-3	Naphthalene	ND		250	224	90	224	90	0	70-130/30
103-65-1	n-Propylbenzene	ND		250	271	108	275	110	1	70-130/30
100-42-5	Styrene	ND		250	244	98	247	99	1	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	285	114	295	118	3	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	250	100	251	100	0	70-130/30
127-18-4	Tetrachloroethene	7.6		250	311	121	315	123	1	70-130/30
109-99-9	Tetrahydrofuran	18.4		250	211	77	184	66* a	14	70-130/30
108-88-3	Toluene	ND		250	232	93	234	94	1	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	255	102	279	112	9	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	230	92	228	91	1	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	226	90	235	94	4	70-130/30
71-55-6	1,1,1-Trichloroethane	3.2		250	235	93	225	89	4	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	227	91	227	91	0	70-130/30
79-01-6	Trichloroethene	63.3		250	272	83	260	79	5	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	222	89	212	85	5	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	201	80	207	83	3	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	266	106	264	106	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	262	105	267	107	2	70-130/30
75-01-4	Vinyl chloride	3.1		250	189	74	182	72	4	70-130/30
	m,p-Xylene	ND		500	520	104	539	108	4	70-130/30
95-47-6	o-Xylene	ND		250	270	108	266	106	1	70-130/30



# 5.3.1

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**Method:** SW846 8260B

# _`

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M87915-1MS	E41712.D	5	12/15/09	SC	n/a	n/a	MSE1811
M87915-1MSD	E41713.D	5	12/15/09	SC	n/a	n/a	MSE1811
M87915-1	E41711.D	1	12/15/09	SC	n/a	n/a	MSE1811

#### The QC reported here applies to the following samples:

M87915-1, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-24, M87915-26

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M87915-1	Limits
	Dibromofluoromethane Toluene-D8	75% 82%	74% 82%	75% 84%	70-130% 70-130%
460-00-4	4-Bromofluorobenzene	82%	81%	80%	70-130%

- (a) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (b) Outside control limits. Blank Spike meets program technical requirements.



**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	<b>Analytical Batch</b>
M88204-1MS	E41818.D	5	12/21/09	SC	n/a	n/a	MSE1814
M88204-1MSD	E41819.D	5	12/21/09	SC	n/a	n/a	MSE1814
M88204-1	E41817.D	1	12/21/09	SC	n/a	n/a	MSE1814
M88204-1	E41820.D	50	12/21/09	SC	n/a	n/a	MSE1814

The QC reported here applies to the following samples:

CAS No.	Compound	M88204-1 ug/l	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	250	85.7	34* a	81.3	33* a	5	70-130/30
107-13-1	Acrylonitrile	ND ND	1250	1060	85	1040	83	2	70-130/30
71-43-2	Benzene	15.1	250	267	101	254	96	5	70-130/30
108-86-1	Bromobenzene	ND	250	293	117	283	113	3	70-130/30
75-27-4	Bromodichloromethane	ND ND	250	246	98	240	96	2	70-130/30
75-27-4 75-25-2	Bromoform	ND ND	250	236	94	240	97	3	70-130/30
73-23-2 74-83-9	Bromomethane	ND ND	250	219	88	203	81	8	70-130/30
78-93-3	2-Butanone (MEK)	ND ND	250	180	72	150	60* b	18	70-130/30
104-51-8	n-Butylbenzene	ND ND	250	287	115	349	140* c	19	70-130/30
135-98-8	sec-Butylbenzene	109	250	282	69* c	297	75	5	70-130/30
98-06-6	tert-Butylbenzene	ND	250	237	95	297	86	9	70-130/30
75-15-0	Carbon disulfide	ND ND	250	208	83	194	78	7	70-130/30
56-23-5	Carbon tetrachloride	ND ND	250	265	106	230	92	14	70-130/30
108-90-7	Chlorobenzene	ND ND	250	293	117	287	115	2	70-130/30
75-00-3	Chloroethane	ND ND	250	206	82	201	80	2	70-130/30
67-66-3	Chloroform	ND ND	250	253	101	244	98	4	70-130/30
74-87-3	Chloromethane	6.4	250	233 197	76	182	70	8	70-130/30
95-49-8	o-Chlorotoluene	ND	250	309	124	301	120	3	70-130/30
106-43-4	p-Chlorotoluene	ND ND	250	256	102	245	98	4	70-130/30
96-12-8	1,2-Dibromo-3-chloropropane		250	309	102	334	134* c	8	70-130/30
124-48-1	Dibromochloromethane	ND ND	250	241	96	250	100	4	70-130/30
106-93-4	1,2-Dibromoethane	ND ND	250	282	113	285	114	1	70-130/30
95-50-1	1,2-Dichlorobenzene	ND	250	225	90	228	91	1	70-130/30
541-73-1	1,3-Dichlorobenzene	ND	250	258	103	240	96	7	70-130/30
106-46-7	1,4-Dichlorobenzene	ND	250	268	103	254	102	5	70-130/30
75-71-8	Dichlorodifluoromethane	ND	250	161	64* c	132	53* c	20	70-130/30
75-34-3	1,1-Dichloroethane	ND	250	234	94	222	89	5	70-130/30
107-06-2	1,2-Dichloroethane	ND	250	247	99	243	97	2	70-130/30
75-35-4	1,1-Dichloroethene	ND	250	232	93	215	86	8	70-130/30
156-59-2	cis-1,2-Dichloroethene	ND	250	253	101	237	95	7	70-130/30
156-60-5	trans-1,2-Dichloroethene	ND	250	241	96	224	90	7	70-130/30
78-87-5	1,2-Dichloropropane	ND	250	240	96	227	91	6	70-130/30
142-28-9	1,3-Dichloropropane	ND	250	269	108	259	104	4	70-130/30
594-20-7	2,2-Dichloropropane	ND	250	263	105	239	96	10	70-130/30
563-58-6	1,1-Dichloropropene	ND	250	275	110	243	97	12	70-130/30
	cis-1,3-Dichloropropene	ND	250	257	103	251	100	2	70-130/30
10001-01-3	215 1,5 Diemoropropene	. 112	250	231	103	231	100	_	, 0 130/30



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**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M88204-1MS	E41818.D	5	12/21/09	SC	n/a	n/a	MSE1814
M88204-1MSD	E41819.D	5	12/21/09	SC	n/a	n/a	MSE1814
M88204-1	E41817.D	1	12/21/09	SC	n/a	n/a	MSE1814
M88204-1	E41820.D	50	12/21/09	SC	n/a	n/a	MSE1814

The QC reported here applies to the following samples:

CAS No.	Compound	M88204-1 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	ND	250	281	112	272	109	3	70-130/30
100-41-4	Ethylbenzene	196	250	451	102	438	97	3	70-130/30
76-13-1	Freon 113	ND	250	311	124	254	102	20	70-130/30
87-68-3	Hexachlorobutadiene	ND	250	257	103	275	110	7	70-130/30
591-78-6	2-Hexanone	ND	250	169	-15* b	156	-20* b	8	70-130/30
98-82-8	Isopropylbenzene	53.9	250	380	130	365	124	4	70-130/30
99-87-6	p-Isopropyltoluene	111	250	296	74	302	76	2	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND	250	238	95	236	94	1	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	250	204	82	215	86	5	70-130/30
74-95-3	Methylene bromide	ND	250	261	104	262	105	0	70-130/30
75-09-2	Methylene chloride	ND	250	238	95	227	91	5	70-130/30
91-20-3	Naphthalene	61.6	250	531	188* c	373	125	35* d	70-130/30
103-65-1	n-Propylbenzene	113	250	374	104	376	105	1	70-130/30
100-42-5	Styrene	0.33	250	283	113	275	110	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND	250	293	117	277	111	6	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND	250	268	107	255	102	5	70-130/30
127-18-4	Tetrachloroethene	ND	250	277	111	260	104	6	70-130/30
109-99-9	Tetrahydrofuran	ND	250	200	80	199	80	1	70-130/30
108-88-3	Toluene	286	250	512	90	492	82	4	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	250	238	95	242	97	2	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND	250	151	60* c	87.9	35* c	53* d	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND	250	200	80	152	61* c	27	70-130/30
71-55-6	1,1,1-Trichloroethane	ND	250	266	106	235	94	12	70-130/30
79-00-5	1,1,2-Trichloroethane	ND	250	264	106	264	106	0	70-130/30
79-01-6	Trichloroethene	ND	250	273	109	256	102	6	70-130/30
75-69-4	Trichlorofluoromethane	ND	250	240	96	200	80	18	70-130/30
96-18-4	1,2,3-Trichloropropane	ND	250	229	92	225	90	2	70-130/30
95-63-6	1,2,4-Trimethylbenzene	1500 ^f	250	1050	-180* e		-124* e	13	70-130/30
108-67-8	1,3,5-Trimethylbenzene	199	250	450	100	481	113	7	70-130/30
75-01-4	Vinyl chloride	ND	250	202	81	179	72	12	70-130/30
	m,p-Xylene	666	500	1210	109	1180	103	3	70-130/30
95-47-6	o-Xylene	349	250	609	104	595	98	2	70-130/30



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**Method:** SW846 8260B

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#### Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

**Account:** LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M88204-1MS	E41818.D	5	12/21/09	SC	n/a	n/a	MSE1814
M88204-1MSD	E41819.D	5	12/21/09	SC	n/a	n/a	MSE1814
M88204-1	E41817.D	1	12/21/09	SC	n/a	n/a	MSE1814
M88204-1	E41820.D	50	12/21/09	SC	n/a	n/a	MSE1814
I							

The QC reported here applies to the following samples:

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M88204-1	M88204-1	Limits
1868-53-7	Dibromofluoromethane	84%	85%	98%	83%	70-130%
2037-26-5	Toluene-D8	105%	100%	106%	107%	70-130%
460-00-4	4-Bromofluorobenzene	87%	83%	65% * g	91%	70-130%

- (a) Outside control limits. Blank Spike meets program technical requirements.
- (b) Outside control limits. Associated samples are non-detect for this compound.
- (c) Outside control limits due to possible matrix interference. Refer to Blank Spike.
- (d) High RPD due to possible matrix interference and/or sample non-homogeneity.
- (e) Outside control limits due to high level in sample relative to spike amount.
- (f) Result is from Run #2.
- (g) Outside control limits due to matrix interference. Confirmed by reanalysis.



# Volatile Internal Standard Area Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

 Check Std:
 MSE1811-CC1790
 Injection Date:
 12/15/09

 Lab File ID:
 E41706.D
 Injection Time:
 15:35

**Instrument ID:** GCMSE **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	225280 450560 112640	9.24 9.74 8.74	263111 526222 131556	10.11 10.61 9.61	113308 226616 56654	13.88	172879 345758 86440	16.43	42082 84164 21041	6.75 7.25 6.25
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSE1811-BS MSE1811-BSD MSE1811-MB M87915-26 M87915-1 M87915-1MSD M87915-1MSD M87915-7 M87915-7 M87915-9 M87915-11 M87915-13 M87915-15 M87915-15	240176 225858 234289 237369 229705 228193 241911 221460 218468 218333 225359 212569 228043 221046	9.24 9.23 9.24 9.24 9.24 9.23 9.23 9.23 9.23 9.23 9.23 9.23	273195 261386 272158 270399 261447 264659 277933 248218 250799 242082 248101 237756 253139 254727		121636 113418 116354 114337 113627 116152 116207 106843 106732 105311 106741 101375 109244 106118	13.37 13.38 13.38 13.38 13.37 13.37 13.37 13.37 13.38 13.37 13.38	184796 176319 175664 171499 171775 166620 172956 172433 171053 173539 176199 170940	15.93 15.93 15.93 15.93 15.93 15.93 15.93 15.93 15.93 15.93 15.93	45232 44407 43800 35574 45030 42054 43102 37872 37781 37217 37447 36247 38828 37743	6.75 6.75 6.75 6.75 6.75 6.75 6.75 6.75
M87915-19 M87915-20 M87915-22 M87915-24 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZZ	215178 225864 214819 216014 222057 213477 210864 215960	9.24 9.23 9.23 9.23 9.23 9.23 9.23 9.23	239818 248404 233176 236378 245322 232020 231075 242678	10.11 10.11 10.11 10.11 10.11 10.10 10.10	104285 105339 100916 101962 106519 101183 102130 104552	13.38 13.37 13.38 13.37 13.37 13.37 13.37	161667 165490 169859 164369 160189	15.93 15.93 15.93 15.92	38317 37954	6.75 6.75 6.74 6.75 6.75 6.75 6.75

IS 1 = Pentafluorobenzene IS 2 = 1,4-Difluorobenzene IS 3 = Chlorobenzene-D5 IS 4 = 1,4-Dichlorobenzene-d4 IS 5 = Tert Butyl Alcohol-D9



⁽a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

⁽b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

# Volatile Internal Standard Area Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

 Check Std:
 MSE1814-CC1813
 Injection Date:
 12/21/09

 Lab File ID:
 E41806.D
 Injection Time:
 15:34

**Instrument ID:** GCMSE **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	227677 455354 113839	9.25 9.75 8.75	349286 698572 174643	10.13 10.63 9.63	180547 361094 90274	13.89	169550 339100 84775		81316 162632 40658	6.77 7.27 6.27
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSE1814-BS MSE1814-BSD MSE1814-MB ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	231211 221681 213531 214450 213367 212758 205932 212145 205903 203306 200690 270706 293020 290818 308315 289713 281049	9.25 9.25 9.25 9.25 9.25 9.25 9.24 9.25 9.24 9.25 9.24 9.25 9.24 9.25	355962 334768 334102 327755 329186 325691 320742 327279 325173 319885 313275 394886 427489 416227 443324 425175 408640	10.12 10.12 10.12 10.12 10.12 10.12 10.12 10.13 10.12 10.12 10.12 10.12 10.12 10.12 10.12	171696 170118 168331 165136 171810 176241 167380 160970 192896 202319 200207 207277 198912 192959	13.39 13.38 13.39 13.39 13.38 13.38 13.38 13.38 13.38 13.38 13.38 13.38 13.38	165368 160212 170778 156089 164496 158928 155929 224065 196038 207422	15.94 15.94 15.94 15.94 15.93 15.94 15.94	79902 78154 66886 68367 66882 77105 68744 71502 87140 68974 77009 83504 81021 85846 81895	6.77 6.76 6.77 6.76 6.77 6.77 6.77 6.76 6.76 6.76 6.76 6.76 6.76 6.75 6.76 6.76
ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZ	270547 245103 242085 236196 228605 233886 223396	9.24 9.24 9.24 9.24 9.24 9.24 9.24	412863 363199 357064 355748 341816 342584 333014	10.12 10.11 10.12 10.12 10.12 10.11 10.12	175807	13.38 13.38 13.38 13.38 13.38 13.38	194640 188330 181915 179567 172941 171772 164225	15.94 15.93 15.94 15.93 15.94 15.93	76670 77511 73515 74052	6.76 6.75 6.76 6.76 6.76 6.76

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9



⁽a) Upper Limit = + 100% of check standard area; Retention time + 0.5 minutes.

⁽b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.

## **Volatile Surrogate Recovery Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

**Method:** SW846 8260B Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	Lab	<b>~</b> .	~~	G-2
Sample ID	File ID	S1	S2	S3
M87915-1	E41711.D	75.0	84.0	80.0
M87915-3	E41816.D	97.0	110.0	97.0
M87915-5	E41716.D	75.0	81.0	78.0
M87915-7	E41717.D	75.0	84.0	77.0
M87915-9	E41718.D	76.0	85.0	76.0
M87915-11	E41719.D	74.0	81.0	77.0
M87915-13	E41720.D	75.0	85.0	74.0
M87915-15	E41721.D	74.0	85.0	78.0
M87915-17	E41722.D	77.0	83.0	76.0
M87915-19	E41723.D	78.0	86.0	76.0
M87915-20	E41724.D	74.0	79.0	76.0
M87915-22	E41725.D	74.0	84.0	77.0
M87915-24	E41726.D	76.0	85.0	76.0
M87915-26	E41710.D	74.0	84.0	79.0
M87915-1MS	E41712.D	75.0	82.0	82.0
M87915-1MSD	E41713.D	74.0	82.0	81.0
M88204-1MS	E41818.D	84.0	105.0	87.0
M88204-1MSD	E41819.D	85.0	100.0	83.0
MSE1811-BS	E41707.D	75.0	85.0	82.0
MSE1811-BSD	E41708.D	75.0	82.0	80.0
MSE1811-MB	E41709.D	77.0	85.0	79.0
MSE1814-BS	E41807.D	92.0	104.0	96.0
MSE1814-BSD	E41808.D	92.0	106.0	94.0
MSE1814-MB	E41809.D	96.0	106.0	94.0

Surrogate Recovery Compounds Limits

S1 = Dibromofluoromethane70-130% S2 = Toluene-D870-130%

S3 = 4-Bromofluorobenzene 70-130%





# GC Semi-volatiles

# QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



**Method:** CT-ETPH 7/06

# **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20189-MB	File ID BC35610.D	<b>DF</b> 1	<b>Analyzed</b> 12/17/09	By KD	<b>Prep Date</b> 12/14/09	Prep Batch OP20189	Analytical Batch GBC1819

The QC reported here applies to the following samples:

M87915-1, M87915-3, M87915-5, M87915-7, M87915-9

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 84% 50-149%



## **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

Sample OP20202-MB	File ID BC35729.D	<b>DF</b> 1	<b>Analyzed</b> 12/21/09	<b>By</b> KD	<b>Prep Date</b> 12/15/09	Prep Batch OP20202	Analytical Batch GBC1824

The QC reported here applies to the following samples:

**Method:** CT-ETPH 7/06

M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. **Surrogate Recoveries** Limits

83% 50-149% 3386-33-2 1-Chlorooctadecane



**Method:** SW846 8082

## **Method Blank Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20201-MB	File ID EF72238.D	<b>DF</b> 1	<b>Analyzed</b> 12/17/09	By SL	<b>Prep Date</b> 12/15/09	Prep Batch OP20201	Analytical Batch GEF3310

#### The QC reported here applies to the following samples:

M87915-1, M87915-3, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	88%	30-150%
877-09-8	Tetrachloro-m-xylene	88%	30-150%
2051-24-3	Decachlorobiphenyl	77%	30-150%
2051-24-3	Decachlorobiphenyl	71%	30-150%



**Method:** CT-ETPH 7/06

## **Blank Spike Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20189-BS	File ID BC35613.D	<b>DF</b> 1	<b>Analyzed</b> 12/17/09	By KD	<b>Prep Date</b> 12/14/09	Prep Batch OP20189	Analytical Batch GBC1819

The QC reported here applies to the following samples:

M87915-1, M87915-3, M87915-5, M87915-7, M87915-9

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.660	94	60-120

CAS No. Surrogate Recoveries BSP Limits
3386-33-2 1-Chlorooctadecane 91% 50-149%



**Method:** CT-ETPH 7/06

## **Blank Spike Summary**

Job Number: M87915

CAS No.

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20202-BS	File ID BC35730.D	<b>DF</b> 1	<b>Analyzed</b> 12/21/09	By KD	<b>Prep Date</b> 12/15/09	Prep Batch OP20202	Analytical Batch GBC1824

Limits

The QC reported here applies to the following samples:

M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.635	91	60-120

**BSP** 

3386-33-2 1-Chlorooctadecane 94% 50-149%

**Surrogate Recoveries** 



**Method:** SW846 8082

## **Blank Spike Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20201-BS	File ID EF72239.D	<b>DF</b> 1	<b>Analyzed</b> 12/17/09	By SL	<b>Prep Date</b> 12/15/09	Prep Batch OP20201	Analytical Batch GEF3310

#### The QC reported here applies to the following samples:

M87915-1, M87915-3, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.1	105	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	2.0	100	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
877-09-8	Tetrachloro-m-xylene	91%	30-150%
877-09-8	Tetrachloro-m-xylene	91%	30-150%
2051-24-3	Decachlorobiphenyl	82%	30-150%
2051-24-3	Decachlorobiphenyl	76%	30-150%



**Method:** CT-ETPH 7/06

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP20189-MS	BC35614.D	1	12/17/09	KD	12/14/09	OP20189	GBC1819
OP20189-MSD	BC35615.D	1	12/17/09	KD	12/14/09	OP20189	GBC1819
M87925-22	BC35616.D	1	12/17/09	KD	12/14/09	OP20189	GBC1819

The QC reported here applies to the following samples:

M87915-1, M87915-3, M87915-5, M87915-7, M87915-9

CAS No.	Compound	M87925-22 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.686	98	0.634	91	8	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8′	7925-22	Limits			
3386-33-2	1-Chlorooctadecane	109%	97%	117	%	50-149%	)		



**Method:** CT-ETPH 7/06

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
OP20202-MS	BC35732.D	1	12/21/09	KD	12/15/09	OP20202	GBC1824
OP20202-MSD	BC35734.D	1	12/21/09	KD	12/15/09	OP20202	GBC1824
M88079-6	BC35736.D	1	12/21/09	KD	12/15/09	OP20202	GBC1824

The QC reported here applies to the following samples:

M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24

CAS No.	Compound	M88079-6 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.532	76	0.517	74	3	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M8	8079-6	Limits			
3386-33-2	1-Chlorooctadecane	85%	89%	86%	ó	50-149%	ó		



**Method:** SW846 8082

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87915

**Account:** LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	<b>Analytical Batch</b>
OP20201-MS	EF72242.D	1	12/17/09	SL	12/15/09	OP20201	GEF3310
OP20201-MSD	EF72243.D	1	12/17/09	SL	12/15/09	OP20201	GEF3310
M88079-5	EF72244.D	1	12/17/09	SL	12/15/09	OP20201	GEF3310

#### The QC reported here applies to the following samples:

M87915-1, M87915-3, M87915-5, M87915-7, M87915-9, M87915-11, M87915-13, M87915-15, M87915-17, M87915-19, M87915-20, M87915-22, M87915-24

CAS No. Compound	M88079-5 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 Aroclor 1016	ND	2	2.4	120	2.1	105	13	40-140/50
11104-28-2 Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 Aroclor 1260	ND	2	2.1	105	2.1	105	0	40-140/50
37324-23-5 Aroclor 1262	ND		ND		ND		nc	40-140/50
11100-14-4 Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	Surrogate Recoveries	MS	MSD	M88079-5	Limits
877-09-8	Tetrachloro-m-xylene	104%	92%	81%	30-150%
877-09-8	Tetrachloro-m-xylene	102%	92%	82%	30-150%
2051-24-3	Decachlorobiphenyl	89%	86%	79%	30-150%
2051-24-3	Decachlorobiphenyl	86%	84%	75%	30-150%



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## **Semivolatile Surrogate Recovery Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH 7/06 Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	Lab	
Sample ID	File ID	<b>S1</b> ^a
M87915-1	BC35717.D	101.0
M87915-3	BC35718.D	74.0
M87915-5	BC35719.D	71.0
M87915-7	BC35720.D	90.0
M87915-9	BC35721.D	88.0
M87915-11	BC35738.D	89.0
M87915-13	BC35740.D	100.0
M87915-15	BC35742.D	107.0
M87915-17	BC35744.D	103.0
M87915-19	BC35746.D	101.0
M87915-20	BC35748.D	105.0
M87915-22	BC35749.D	75.0
M87915-24	BC35750.D	73.0
OP20189-BS	BC35613.D	91.0
OP20189-MB	BC35610.D	84.0
OP20189-MS	BC35614.D	109.0
OP20189-MSD	BC35615.D	97.0
OP20202-BS	BC35730.D	94.0
OP20202-MB	BC35729.D	83.0
OP20202-MS	BC35732.D	85.0
OP20202-MSD	BC35734.D	89.0

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



## **Semivolatile Surrogate Recovery Summary**

Job Number: M87915

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: SW846 8082 Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	Lab				
Sample ID	File ID	S1 a	<b>S1</b> b	<b>S2</b> a	<b>S2</b> b
M87915-1	EF72352.D	80.0	100.0	73.0	75.0
M87915-3	EF72353.D	75.0	97.0	78.0	80.0
M87915-5	EF72354.D	76.0	91.0	91.0	95.0
M87915-7	EF72355.D	90.0	105.0	98.0	101.0
M87915-9	EF72356.D	81.0	102.0	103.0	101.0
M87915-11	EF72357.D	82.0	98.0	72.0	71.0
M87915-13	EF72358.D	77.0	99.0	106.0	109.0
M87915-15	EF72359.D	75.0	99.0	103.0	107.0
M87915-17	EF72360.D	89.0	103.0	83.0	87.0
M87915-19	EF72361.D	65.0	84.0	53.0	61.0
M87915-20	EF72363.D	90.0	105.0	79.0	86.0
M87915-22	EF72364.D	95.0	111.0	87.0	95.0
M87915-24	EF72365.D	83.0	106.0	92.0	100.0
OP20201-BS	EF72239.D	91.0	91.0	82.0	76.0
OP20201-MB	EF72238.D	88.0	88.0	77.0	71.0
OP20201-MS	EF72242.D	104.0	102.0	89.0	86.0
OP20201-MSD	EF72243.D	92.0	92.0	86.0	84.0

# **Surrogate Compounds**

Recovery Limits

S1 = Tetrachloro-m-xylene 30-150% S2 = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1

(b) Recovery from GC signal #2





# Metals Analysis

# QC Data Summaries

# Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M87915

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14563 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/10/09

Metal	RL	IDL	MDL	MB raw	final
Mercury	0.20	.035	.048	0.015	<0.20

Associated samples MP14563: M87915-2, M87915-4, M87915-6, M87915-8

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 

(anr) Analyte not requested

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#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87915 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14563 Methods: SW846 7470A

Matrix Type: AQUEOUS

12/10/09 12/10/09

Units: ug/l

Metal	M87880-4 Original		Spikelot HGRWS1	% Rec	QC Limits	M87880-4 Original		RPD	QC Limits
Mercury	0.0	3.1	3	103.3	75-125	0.0	0.0	NC	0-20

Associated samples MP14563: M87915-2, M87915-4, M87915-6, M87915-8

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\hfill \hfill \h$ 

Prep Date:

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87915
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14563 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/10/09 12/10/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.1	3	103.3	80-120	3.0	3	100.0	3.3	20

Associated samples MP14563: M87915-2, M87915-4, M87915-6, M87915-8

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 

(anr) Analyte not requested

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

# Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Matrix Type: AQUEOUS Methods: SW846 6010B

Units: ug/l

Prep Date:

12/10/09

Autimony 6.0 1.4 1.6 seric 10 1 1.8 0.10 <10 seric 10 1 1.8 0.10 <10 seric 10 1 1.8 0.10 <10 seric 10 1.5	TICP Ducc.					12/10/02
timony 6.0 1.4 1.6 seric 10 1 1.8 0.10 <10 seric 10 1 1.8 0.10 <10 seric 10 1 1.8 0.10 <10 seric 10 1.1 1.3 <200 seryllium 4.0 .15 .4 1.9 0.10 <4.0 seryllium 5000 7.6 15 15 seric 10 10 .25 .3 seric 10 10 .25 .3 seric 10 10 .25 .3 seric 10 10 .25 .3 seric 10 10 .27 0.10 <5.0 seric 10 10 .22 .8 seric 10 .12 1.1 seric 10 seric 10 .22 .8 seric 10 .22 .8 seric 10 .22 .8 seric 10 .22 .8 seric 10 .22 .8 seric 10 .22 .8 seric 10 .23 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .3 seric 10 .24 .	Metal	RL	IDL	MDL		final
resenic 10 1 1.8 0.10 <10 arium 200 .57 1.1 1.3 <200 arium 200 .57 1.1 1.3 <200 arium 4.0 .15 .4 arium 4.0 .15 .4 arium 5000 7.6 15 arium 5000 7.6 15 arium 10 .81 1.1 -0.10 <10 arium 500 arium 10 .81 1.1 -0.10 <10 arium 500 arium 10 .81 1.1 -0.10 <10 arium 500 arium 10 .25 .3 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500 arium 500	Aluminum	200	27	40		
Arium 200 .57 1.1 1.3 <200  Pryllium 4.0 .15 .4  Pron 100 .65 2.3  Admium 4.0 .24 1.9 0.10 <4.0  Promium 10 .81 1.1 -0.10 <10  Proper 25 .2 2 4 0.50 <25  Pron 100 3.7 13  Pron	Antimony	6.0	1.4	1.6		
A coron 100 .65 2.3 and admium 4.0 .24 1.9 0.10 <4.0 and admium 5000 7.6 15 aromium 10 .81 1.1 -0.10 <10 and admium 50 .25 .3 aromium 10 .81 1.1 -0.10 <10 and admium 50 .37 13 and admium 50 .27 and admium 50 .28 and admium 50 .29 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .20 and admium 50 .70 and and admium 50 .70 and and and and and and and and and and	Arsenic	10	1	1.8	0.10	<10
Admium 4.0 .24 1.9 0.10 <4.0 alcium 5000 7.6 15 aromium 10 .81 1.1 -0.10 <10 alcium 5000 7.6 15 aromium 10 .81 1.1 -0.10 <10 alcium 50 .25 .3 aromium 10 3.7 13 aromium 50 1.1 2.7 0.10 <5.0 argnesium 5000 37 77 arganese 15 .12 1.1 alcium 50 9.3 13 aromium 50 5.6 1.3 aromium 50 61 160 aromium 10 .24 .3 aromium 50 61 160 aromium 50 .24 .3 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 50 .74 .8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 .56 8 8 aromium 100 8 8 9 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	Barium	200	.57	1.1	1.3	<200
Admium 4.0 .24 1.9 0.10 <4.0 Alcium 5000 7.6 15 Alcium 5000 7.6 15 Alcium 5000 7.6 15 Alcium 50 .25 .3 Alcium 50 .25 .3 Alcium 50 .25 .3 Alcium 50 .25 Alcium 5000 3.7 13 Alcium 50 .22 Alcium 50 .22 Alcium 50 .22 Alcium 50 .22 Alcium 50 .22 Alcium 50 .22 Alcium 50 .23 Alcium 50 .24 Alcium 50 .25 Alcium 5000 39 Alcium 5000 39 Alcium 5000 39 Alcium 5000 39 Alcium 5000 39 Alcium 50 .24 Alcium 50 .25 Alcium 5000 39 Alcium 5000 39 Alcium 5000 39 Alcium 5000 39 Alcium 5000 39 Alcium 5000 61 Alcium 50 .54 Alcium 50 .54 Alcium 50 .54 Alcium 50 .54 Alcium 50 .54 Alcium 50 .55 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 5000 61 Alcium 500 Alcium 5000 61 Alcium 500 Alcium 5000 61 Alcium 500 Alcium 5000 61 Alcium 500 Alcium 5000 61 Alcium 500 Alcium 5000 61 Alcium 500 Alcium 5000 Alcium 5000 61 Alcium 500 Alcium 5000 61 Alcium 500 Alcium 5000 Alcium 5000 61 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alcium 5000 Alciu	Beryllium	4.0	.15	. 4		
Alcium 5000 7.6 15 Aromium 10 .81 1.1 -0.10 <10 Aromium 10 .81 1.1 -0.10 <10 Aromium 10 .81 1.1 -0.10 <10 Aromium 10 .81 1.1 -0.10 <10 Aromium 10 .81 1.1 -0.10 <10 Aromium 100 .25 .3 Aromium 100 .3.7 13 Aromium 5000 37 77 Araganese 15 .12 1.1 Arighdenum 100 .22 .8 Arighdenum 100 .22 .8 Arighdenum 50 2.2 4 Arighdenum 50 9.3 13 Arighdenum 10 1.9 3.5 -0.90 <10 Arighdenum 10 1.9 3.5 -0.90 <10 Arighdenum 10 1.9 3.5 -0.50 <5.0 Arighdenum 5000 61 160 Aromium 5000 61 160 Aromium 5000 61 160 Aromium 5000 61 1.3 Arighdenum 10 1.2 1.3 Arighdenum 10 1.2 1.3 Arighdenum 10 1.2 1.3 Arighdenum 10 5.6 8 Arighdenum 50 .74 .8	Boron	100	. 65	2.3		
Arromium 10 .81 1.1 -0.10 <10 abalt 50 .25 .3 abalt 50 .25 .3 abalt 50 .25 .3 abalt 50 .25 .3 abalt 50 .25 .3 abalt 50 .1.1 4.2 abalt 50 .1.1 4.2 abalt 50 .1.1 2.7 0.10 <5.0 agnesium 5000 37 77 abalt 50 .12 1.1 abalt 50 .22 .8 abalt 60 .24 1.3 0.30 <40 abalt 60 .24 1.3 0.30 <40 abalt 60 .20	Cadmium	4.0	. 24	1.9	0.10	<4.0
abalt       50       .25       .3         apper       25       2.2       4       0.50       <25	Calcium	5000	7.6	15		
opper       25       2.2       4       0.50       <25	Chromium	10	.81	1.1	-0.10	<10
1.1   4.2   2.7   0.10   2.0   2.0   2.2   4   2.0   2.0   2.2   4   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2.0   2	Cobalt	50	. 25	.3		
con       100       3.7       13         ead       5.0       1.1       2.7       0.10       <5.0	Copper	25	2.2	4	0.50	<25
ead       5.0       1.1       2.7       0.10       <5.0	Gold	50	1.1	4.2		
agnesium 5000 37 77  anganese 15 .12 1.1  olybdenum 100 .22 .8  dekel 40 .24 1.3 0.30 <40  alladium 50 2.2 4  Latinum 50 9.3 13  otassium 5000 39 46  elenium 10 1.9 3.5 -0.90 <10  ilicon 100 8.9 36  ilver 5.0 .54 1.3 -0.50 <5.0  odium 5000 61 160  crontium 10 .24 .3  nallium 10 1.2 1.3  in 100 .65 1.3  itanium 50 .74 .8  angsten 100 5.6 8  anadium 30 .68 1.6	Iron	100	3.7	13		
anganese 15 .12 1.1  olybdenum 100 .22 .8  ickel 40 .24 1.3 0.30 <40  alladium 50 2.2 4  latinum 50 9.3 13  otassium 5000 39 46  elenium 10 1.9 3.5 -0.90 <10  allicon 100 8.9 36  allver 5.0 .54 1.3 -0.50 <5.0  odium 5000 61 160  crontium 10 1.2 1.3  allium 10 1.2 1.3  itanium 50 .74 .8  angsten 100 5.6 8  anadium 30 .68 1.6	Lead	5.0	1.1	2.7	0.10	<5.0
100   .22   .8   .3   .30   .40   .31   .30   .40   .31   .30   .40   .31   .30   .30   .40   .31   .30   .30   .40   .31   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30   .30	Magnesium	5000	37	77		
ickel       40       .24       1.3       0.30       <40	Manganese	15	.12	1.1		
Alladium 50 2.2 4  Latinum 50 9.3 13  Datassium 5000 39 46  Elenium 10 1.9 3.5 -0.90 <10  Lilicon 100 8.9 36  Lilver 5.0 .54 1.3 -0.50 <5.0  Dedium 5000 61 160  Crontium 10 1.2 1.3  Latinum 10 .65 1.3  Latinum 50 .74 .8  Langsten 100 5.6 8  Lanadium 30 .68 1.6	Molybdenum	100	. 22	.8		
Latinum       50       9.3       13         ptassium       5000       39       46         elenium       10       1.9       3.5       -0.90       <10	Nickel	40	. 24	1.3	0.30	<40
stassium       5000       39       46         elenium       10       1.9       3.5       -0.90       <10	Palladium	50	2.2	4		
1.9   3.5   -0.90   <10	Platinum	50	9.3	13		
100 8.9 36 11ver 5.0 .54 1.3 -0.50 <5.0 11ver 5.0 .54 1.3 -0.50 <5.0 11ver 5.0 .54 1.3 -0.50 <5.0 11ver 5.0 .54 1.3 -0.50 <5.0 11ver 5.0 .54 1.3 11ver 5.0 .65 1.3 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8 11ver 5.0 .74 .8	Potassium	5000	39	46		
Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution   Solution	Selenium	10	1.9	3.5	-0.90	<10
bodium 5000 61 160  crontium 10 .24 .3  hallium 10 1.2 1.3  in 100 .65 1.3  itanium 50 .74 .8  angsten 100 5.6 8  anadium 30 .68 1.6	Silicon	100	8.9	36		
rontium 10 .24 .3  nallium 10 1.2 1.3  in 100 .65 1.3  itanium 50 .74 .8  nagsten 100 5.6 8  anadium 30 .68 1.6	Silver	5.0	.54	1.3	-0.50	<5.0
10 1.2 1.3 in 100 .65 1.3 itanium 50 .74 .8 in 100 5.6 8 anadium 30 .68 1.6	Sodium	5000	61	160		
in 100 .65 1.3 itanium 50 .74 .8 ingsten 100 5.6 8 anadium 30 .68 1.6	Strontium	10	. 24	.3		
itanium 50 .74 .8 ingsten 100 5.6 8 anadium 30 .68 1.6	Thallium	10	1.2	1.3		
angsten 100 5.6 8 anadium 30 .68 1.6	Tin	100	.65	1.3		
anadium 30 .68 1.6	Titanium	50	.74	.8		
	Tungsten	100	5.6	8		
ing 20 .74 1.5 1.2 <20	Vanadium	30	.68	1.6		
20 ./1 1.0 1.2	Zinc	20	.74	1.5	1.2	<20

Associated samples MP14565: M87915-2, M87915-4, M87915-6, M87915-8, M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87915
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:				12/10/09	)			12/10/0	9
Metal	M87915		Spikelot MPICP	% Rec	QC Limits	M87915- Origina		RPD	QC Limits
Aluminum									
Antimony									
Arsenic	0.0	539	500	107.8	75-125	0.0	0.0	NC	0-20
Barium	271	2300	2000	101.5	75-125	271	271	0.0	0-20
Beryllium									
Boron									
Cadmium	0.0	546	500	109.2	75-125	0.0	0.0	NC	0-20
Calcium									
Chromium	0.0	489	500	97.8	75-125	0.0	0.0	NC	0-20
Cobalt									
Copper	0.0	525	500	105.0	75-125	0.0	0.0	NC	0-20
Gold									
Iron	anr								
Lead	1.4	998	1000	99.7	75-125	1.4	1.3	7.4	0-20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	1.0	499	500	99.6	75-125	1.0	1.2	18.2	0-20
Palladium									
Platinum									
Potassium									
Selenium	0.0	532	500	106.4	75-125	0.0	0.0	NC	0-20
Silicon									
Silver	0.0	217	200	108.5	75-125	0.0	0.0	NC	0-20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	0.0	474	500	94.8	75-125	0.0	0.0	NC	0-20

Associated samples MP14565: M87915-2, M87915-4, M87915-6, M87915-8, M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27



Page 1

#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (N) Matrix Spike Rec. outside of QC limits (anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87915
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/10/09 12/10/09

Prep Date:			12/10/09	)				12/10/09	)
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelo MPICP	t % Rec	BSD RPD	QC Limit
Aluminum									
Antimony									
Arsenic	520	500	104.0	80-120	530	500	106.0	1.9	20
Barium	2000	2000	100.0	80-120	2010	2000	100.5	0.5	20
Beryllium									
Boron									
Cadmium	517	500	103.4	80-120	529	500	105.8	2.3	20
Calcium									
Chromium	493	500	98.6	80-120	484	500	96.8	1.8	20
Cobalt									
Copper	498	500	99.6	80-120	488	500	97.6	2.0	20
Gold									
Iron	anr								
Lead	1000	1000	100.0	80-120	1030	1000	103.0	3.0	20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	501	500	100.2	80-120	512	500	102.4	2.2	20
Palladium									
Platinum									
Potassium									
Selenium	525	500	105.0	80-120	532	500	106.4	1.3	20
Silicon									
Silver	204	200	102.0	80-120	200	200	100.0	2.0	20
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	500	500	100.0	80-120	512	500	102.4	2.4	20

Associated samples MP14565: M87915-2, M87915-4, M87915-6, M87915-8, M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

#### SERIAL DILUTION RESULTS SUMMARY

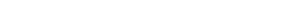
Login Number: M87915
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/10/09

Metal	M87915-1 Original	0 SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	271	273	0.9	0-10
Beryllium				
Boron				
Cadmium	0.00	0.00	NC	0-10
Calcium				
Chromium	0.00	0.00	NC	0-10
Cobalt				
Copper	0.00	0.00	NC	0-10
Gold				
Iron	anr			
Lead	1.40	0.00	100.0(a)	0-10
Magnesium				
Manganese	anr			
Molybdenum				
Nickel	1.00	0.00	100.0(a)	0-10
Palladium				
Platinum				
Potassium				
Selenium	0.00	0.00	NC	0-10
Silicon				
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Tungsten				
Vanadium				
Zinc	0.00	0.00	NC	0-10

Associated samples MP14565: M87915-2, M87915-4, M87915-6, M87915-8, M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27





#### SERIAL DILUTION RESULTS SUMMARY

Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14565 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample  $\,$  concentration (< 50 times IDL).

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M87915

Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14583 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/12/09

Associated samples MP14583: M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

____



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14583 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

12/12/09 12/12/09 Prep Date:

Metal	M87925-: Origina		Spikelot HGRWS1	% Rec	QC Limits	M87925- Origina		RPD	QC Limits
Mercury	0.0	2.8	3	93.3	75-125	0.0	0.0	NC	0-20

Associated samples MP14583: M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits

- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87915 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14583 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/12/09 12/12/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	3.1	3	103.3	80-120	3.1	3	103.3	0.0	20

Associated samples MP14583: M87915-10, M87915-12, M87915-14, M87915-16, M87915-18, M87915-21, M87915-23, M87915-25, M87915-27

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested







12/24/09

12/24/09



## Technical Report for

Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond

88UT907

Accutest Job Number: M87994

Sampling Date: 12/09/09

### Report to:

Loureiro Eng. Associates

rlmckinney@loureiro.com

ATTN: Robin MCKinney

Total number of pages in report: 70





Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Client Service contact: Kristen Blanchard 508-481-6200

NY (11791) NJ (MA926) NC (653) IL (200018) NAVY USACE

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Certifications: MA (M-MA136) CT (PH-0109) NH (2502) RI (00071) ME (MA0136) FL (E87579)

Reza Fand Lab Director

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# **Sample Summary**

Loureiro Eng. Associates

Job No: M87994

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Collected Date	Time By	Received	Matr Code		Client Sample ID
M87994-1	12/09/09	09:30 CSB	12/10/09	AQ	Ground Water	1136019
M87994-2	12/09/09	09:30 CSB	12/10/09	AQ	Ground Water	1136019UF
M87994-3	12/09/09	11:20 CSB	12/10/09	AQ	Ground Water	1136020
M87994-4	12/09/09	11:20 CSB	12/10/09	AQ	Ground Water	1136020UF
M87994-5	12/09/09	12:40 CSB	12/10/09	AQ	Ground Water	1136021
M87994-6	12/09/09	12:40 CSB	12/10/09	AQ	Ground Water	1136021UF
M87994-7	12/09/09	09:00 CSB	12/10/09	AQ	Ground Water	1136025
M87994-8	12/09/09	13:45 CSB	12/10/09	AQ	Ground Water	1136024





#### SAMPLE DELIVERY GROUP CASE NARRATIVE

Client: Loureiro Eng. Associates Job No M87994

Site: UTC: 2009 Quarterly GW-Willow Pond Report Date 12/24/2009 4:08:31 P

8 Samples were collected on 12/09/2009 and were received at Accutest on 12/10/2009 properly preserved, at 0.9 Deg. C and intact. These Samples received an Accutest job number of M87994. A listing of the Laboratory Sample ID, Client Sample ID and dates of collection are presented in the Results Summary Section of this report.

Except as noted below, all method specified calibrations and quality control performance criteria were met for this job. For more information, please refer to QC summary pages.

#### Volatiles by GCMS By Method SW846 8260B

Matrix: AQ Batch ID: MSN1450

- All samples were analyzed within the recommended method holding time.
- Sample(s) M87989-4MS, M87989-4MSD were used as the QC samples indicated.
- All method blanks for this batch meet method specific criteria.
- Matrix Spike/Matrix Spike Duplciate Recovery(s) for Dichlorodifluoromethane are outside control limits. Blank Spike meets program technical requirements.
- Blank Spike/Blank Spike Duplicate Recovery(s) for Dichlorodifluoromethane and the Blank Spike Duplicate Recovery for Tetrachloroethene are outside control limits. Blank Spike meets program technical requirements.
- Dichlorodifluoromethane, Isopropylbenzene, and Hexachlorobutadiene did not meet RCP ICV acceptance criteria (were wtihin 65-135% recovery). This ICV met RCP acceptance criteria.

#### Extractables by GC By Method CT-ETPH 7/06

Matrix: AQ Batch ID: OP20208

- All samples were analyzed within the recommended method holding time.
- All samples were extracted within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M88079-8MS, M88079-8MSD were used as the QC samples indicated.

#### Extractables by GC By Method SW846 8082

Matrix: AQ Batch ID: OP20193

- All samples were extracted within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- All method blanks for this batch meet method specific criteria.
- Sample(s) M87925-22MS, M87925-22MSD, OP20193-MSMSD were used as the QC samples indicated.



#### Metals By Method SW846 6010B

Matrix: AO Batch ID: MP14587

- All samples were analyzed within the recommended method holding time.
- All samples were digested within the recommended method holding time.
- Sample(s) M87994-2DUP, M87994-2DUP, M87994-2MS, M87994-2SDL were used as the QC samples for metals.
- All method blanks for this batch meet method specific criteria.
- RPD(s) for Serial Dilution for Barium are outside control limits for sample MP14587-SD1. Serial Dilution RPD acceptable due to low duplicate and sample concentrations.
- RPD(s) for Duplicate for Chromium, Copper are outside control limits for sample MP14587-D1, MP14587-D1. RPD acceptable due to low duplicate and sample concentrations.

#### Metals By Method SW846 7470A

Matrix: AQ Batch ID: MP14599

- All samples were digested within the recommended method holding time.
- All samples were analyzed within the recommended method holding time.
- Sample(s) M87994-2DUP, M87994-2MS were used as the QC samples for metals.
- All method blanks for this batch meet method specific criteria.

The Accutest Laboratories of New England certifies that all analysis were performed within method specification. It is further recommended that this report to be used in its entirety. The Accutest Laboratories of NE, Laboratory Director or assignee as verified by the signature on the cover page has authorized the release of this report(M87994).



Samp	1 _	D	14
Samn	10	Recii	ITC
Danie.	$\cdot$	IXCBU.	$\mathbf{L}$



Client Sample ID: 1136019

 Lab Sample ID:
 M87994-1
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N38688.D 1 12/17/09 WC n/a n/a MSN1450

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136019 Lab Sample ID: M87994-1

 Lab Sample ID:
 M87994-1
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits

90%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 3 of 3

Client Sample ID: 1136019

 Lab Sample ID:
 M87994-1
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



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Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136019

Lab Sample ID:M87994-1Date Sampled:12/09/09Matrix:AQ - Ground WaterDate Received:12/10/09Method:CT-ETPH 7/06 SW846 3510CPercent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 BC35800.D 1 12/23/09 KD 12/16/09 OP20208 GBC1829

Run #2

Initial Volume Final Volume Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Surrogate Recoveries Run# 1 Run# 2 Limits

3386-33-2 1-Chlorooctadecane 81% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136019 Lab Sample ID: M87994-1

**Date Sampled:** 12/09/09 Matrix: AQ - Ground Water **Date Received:** 12/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72388.D 1 12/23/09 SL12/14/09 OP20193 GEF3314

Run #2

**Initial Volume Final Volume** 

Run #1 800 ml 5.0 ml

Run #2

2051-24-3

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.31	ug/l
11104-28-2	Aroclor 1221	ND	0.31	ug/l
11141-16-5	Aroclor 1232	ND	0.31	ug/l
53469-21-9	Aroclor 1242	ND	0.31	ug/l
12672-29-6	Aroclor 1248	ND	0.31	ug/l
11097-69-1	Aroclor 1254	ND	0.31	ug/l
11096-82-5	Aroclor 1260	ND	0.31	ug/l
37324-23-5	Aroclor 1262	ND	0.31	ug/l
11100-14-4	Aroclor 1268	ND	0.31	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
877-09-8	Tetrachloro-m-xylene	59%		30-150%
877-09-8	Tetrachloro-m-xylene	88%		30-150%
2051-24-3	Decachlorobiphenyl	94%		30-150%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

Decachlorobiphenyl

J = Indicates an estimated value

30-150%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136019UF

Lab Sample ID:M87994-2Date Sampled:12/09/09Matrix:AQ - Ground WaterDate Received:12/10/09Percent Solids:n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/17/09	12/17/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11301(2) Instrument QC Batch: MA11302(3) Prep QC Batch: MP14587(4) Prep QC Batch: MP14599

Client Sample ID: 1136020

 Lab Sample ID:
 M87994-3
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N38689.D 1 12/17/09 WC n/a n/a MSN1450

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.9	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



**Client Sample ID:** 1136020 **Lab Sample ID:** M87994-3

 Lab Sample ID:
 M87994-3
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	19.6	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	6.5	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits

1868-53-7 Dibromofluoromethane 91% 70-130%

 $ND = \ Not \ detected$ 

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank





Client Sample ID: 1136020

 Lab Sample ID:
 M87994-3
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	89%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



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### **Report of Analysis**

Client Sample ID: 1136020

Lab Sample ID: M87994-3 **Date Sampled:** 12/09/09 **Date Received:** 12/10/09 Matrix: AQ - Ground Water Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC35802.D 1 12/23/09 KD 12/16/09 OP20208 GBC1829

Run #2

**Initial Volume Final Volume** Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) ND 0.10 mg/l

CAS No. Run# 2 **Surrogate Recoveries** Run# 1 Limits

1-Chlorooctadecane 3386-33-2 82% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Page 1 of 1

Client Sample ID: 1136020

Lab Sample ID: M87994-3 **Date Sampled:** 12/09/09 Matrix: AQ - Ground Water **Date Received:** 12/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72389.D 1 12/23/09 SL 12/14/09 OP20193 GEF3314

Run #2

**Initial Volume Final Volume** 

Run #1 800 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.31	ug/l	
11104-28-2	Aroclor 1221	ND	0.31	ug/l	
11141-16-5	Aroclor 1232	ND	0.31	ug/l	
53469-21-9	Aroclor 1242	ND	0.31	ug/l	
12672-29-6	Aroclor 1248	ND	0.31	ug/l	
11097-69-1	Aroclor 1254	ND	0.31	ug/l	
11096-82-5	Aroclor 1260	ND	0.31	ug/l	
37324-23-5	Aroclor 1262	ND	0.31	ug/l	
11100-14-4	Aroclor 1268	ND	0.31	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limi	ts
877-09-8	Tetrachloro-m-xylene	99%		30-15	50%
877-09-8	Tetrachloro-m-xylene	107%		30-15	50%
2051-24-3	Decachlorobiphenyl	92%		30-15	50%
2051-24-3	Decachlorobiphenyl	92%		30-15	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



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## **Report of Analysis**

Client Sample ID: 1136020UF Lab Sample ID: M87994-4

**Date Sampled:** 12/09/09 Matrix: **Date Received:** 12/10/09 AQ - Ground Water

Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	<b>Prep Method</b>
Arsenic	< 4.0	4.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	< 25	25	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/17/09	12/17/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	< 40	40	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11301 (2) Instrument QC Batch: MA11302 (3) Prep QC Batch: MP14587 (4) Prep QC Batch: MP14599

Client Sample ID: 1136021

 Lab Sample ID:
 M87994-5
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N38690.D 1 12/17/09 WC n/a n/a MSN1450

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	4.5	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	2.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136021

Lab Sample ID: M87994-5 **Date Sampled:** 12/09/09 **Date Received:** 12/10/09 Matrix: AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	1.5	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	3.1	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limit	s
1868 53 7	Dibromofluoromethane	Ω1%		70.13	∩0⁄a

1868-53-7 Dibromofluoromethane 91% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



# C

### **Report of Analysis**

Client Sample ID: 1136021

 Lab Sample ID:
 M87994-5
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ Indicates \ analyte \ found \ in \ associated \ method \ blank$ 



Client Sample ID: 1136021

Lab Sample ID: M87994-5 **Date Sampled:** 12/09/09 **Date Received:** 12/10/09 Matrix: AQ - Ground Water Method: CT-ETPH 7/06 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 BC35804.D 1 12/23/09 KD 12/16/09 OP20208 GBC1829

Run #2

**Initial Volume Final Volume** Run #1 800 ml 1.0 ml

Run #2

CAS No. Compound Result RLUnits Q

> CT-DRO (C9-C36) 0.555 0.10 mg/l

CAS No. Run# 2 **Surrogate Recoveries** Run# 1 Limits

1-Chlorooctadecane 3386-33-2 71% 50-149%

ND = Not detected RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound



Page 1 of 1

Page 1 of 1

### **Report of Analysis**

Client Sample ID: 1136021 Lab Sample ID: M87994-5

**Date Sampled:** 12/09/09 Matrix: AQ - Ground Water **Date Received:** 12/10/09 Method: SW846 8082 SW846 3510C Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

File ID DF **Prep Date Prep Batch Analytical Batch** Analyzed By Run #1 EF72390.D 1 12/23/09 SL12/14/09 OP20193 GEF3314

Run #2

**Initial Volume Final Volume** 

Run #1 800 ml 5.0 ml

Run #2

#### CT Polychlorinated Biphenyls RCP List

CAS No.	Compound	Result	RL	Units	Q
12674-11-2	Aroclor 1016	ND	0.31	ug/l	
11104-28-2	Aroclor 1221	ND	0.31	ug/l	
11141-16-5	Aroclor 1232	ND	0.31	ug/l	
53469-21-9	Aroclor 1242	ND	0.31	ug/l	
12672-29-6	Aroclor 1248	ND	0.31	ug/l	
11097-69-1	Aroclor 1254	ND	0.31	ug/l	
11096-82-5	Aroclor 1260	ND	0.31	ug/l	
37324-23-5	Aroclor 1262	ND	0.31	ug/l	
11100-14-4	Aroclor 1268	ND	0.31	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limi	ts
877-09-8	Tetrachloro-m-xylene	83%		30-1	50%
877-09-8	Tetrachloro-m-xylene	93%		30-13	50%
2051-24-3	Decachlorobiphenyl	82%		30-13	50%
2051-24-3	Decachlorobiphenyl	81%		30-13	50%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Page 1 of 1

## **Report of Analysis**

Client Sample ID: 1136021UF Lab Sample ID: M87994-6

**Date Sampled:** 12/09/09 Matrix: **Date Received:** 12/10/09 AQ - Ground Water

Percent Solids: n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **Total Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 4.0	4.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
			U	1	,, -,			
Barium	< 200	200	ug/l	1	12/14/09	12/11/09 PY	SW846 6010B ²	SW846 3010A ³
Cadmium	70.8	4.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Copper	25.3	25	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Lead	< 5.0	5.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	12/17/09	12/17/09 MA	SW846 7470A ¹	SW846 7470A ⁴
Nickel	1950	40	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Selenium	< 10	10	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Silver	< 5.0	5.0	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³
Zinc	< 20	20	ug/l	1	12/14/09	12/17/09 PY	SW846 6010B ²	SW846 3010A ³

(1) Instrument QC Batch: MA11301 (2) Instrument QC Batch: MA11302 (3) Prep QC Batch: MP14587 (4) Prep QC Batch: MP14599

Client Sample ID: 1136025

 Lab Sample ID:
 M87994-7
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N38691.D 1 12/17/09 WC n/a n/a MSN1450

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



Client Sample ID: 1136025

Lab Sample ID: M87994-7 **Date Sampled:** 12/09/09 **Date Received:** 12/10/09 Matrix: AQ - Ground Water Method: SW846 8260B Percent Solids: n/a

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	ND	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	ND	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	ND	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limit	s
1868 53 7	Dibromofluoromethane	Ω1%		70.13	∩0/ ₆

1868-53-7 Dibromofluoromethane 91% 70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank



Client Sample ID: 1136025

 Lab Sample ID:
 M87994-7
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	91%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

 $B = \ \, \text{Indicates analyte found in associated method blank}$ 



Client Sample ID: 1136024

 Lab Sample ID:
 M87994-8
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

File ID DF Analyzed By Prep Date Prep Batch Analytical Batch
Run #1 N38692.D 1 12/17/09 WC n/a n/a MSN1450

Run #2

**Purge Volume** 

Run #1 5.0 ml

Run #2

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
67-64-1	Acetone	ND	5.0	ug/l	
107-13-1	Acrylonitrile	ND	25	ug/l	
71-43-2	Benzene	ND	0.50	ug/l	
108-86-1	Bromobenzene	ND	5.0	ug/l	
75-27-4	Bromodichloromethane	ND	1.0	ug/l	
75-25-2	Bromoform	ND	1.0	ug/l	
74-83-9	Bromomethane	ND	2.0	ug/l	
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l	
104-51-8	n-Butylbenzene	ND	5.0	ug/l	
135-98-8	sec-Butylbenzene	ND	5.0	ug/l	
98-06-6	tert-Butylbenzene	ND	5.0	ug/l	
75-15-0	Carbon disulfide	ND	5.0	ug/l	
56-23-5	Carbon tetrachloride	ND	1.0	ug/l	
108-90-7	Chlorobenzene	ND	1.0	ug/l	
75-00-3	Chloroethane	ND	2.0	ug/l	
67-66-3	Chloroform	ND	1.0	ug/l	
74-87-3	Chloromethane	ND	2.0	ug/l	
95-49-8	o-Chlorotoluene	ND	5.0	ug/l	
106-43-4	p-Chlorotoluene	ND	5.0	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l	
124-48-1	Dibromochloromethane	ND	1.0	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l	
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l	
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l	
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l	
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l	
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l	
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l	
156-59-2	cis-1,2-Dichloroethene	90.7	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethene	20.3	1.0	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l	

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound



C

Client Sample ID: 1136024 Lab Sample ID: M87994-8

 Lab Sample ID:
 M87994-8
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Compound	Result	RL	Units	Q
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l	
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l	
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l	
100-41-4	Ethylbenzene	ND	1.0	ug/l	
76-13-1	Freon 113	ND	5.0	ug/l	
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l	
591-78-6	2-Hexanone	ND	5.0	ug/l	
98-82-8	Isopropylbenzene	ND	5.0	ug/l	
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l	
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l	
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l	
74-95-3	Methylene bromide	ND	5.0	ug/l	
75-09-2	Methylene chloride	ND	2.0	ug/l	
91-20-3	Naphthalene	ND	5.0	ug/l	
103-65-1	n-Propylbenzene	ND	5.0	ug/l	
100-42-5	Styrene	ND	5.0	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l	
127-18-4	Tetrachloroethene	35.0	1.0	ug/l	
109-99-9	Tetrahydrofuran	ND	10	ug/l	
108-88-3	Toluene	ND	1.0	ug/l	
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l	
79-01-6	Trichloroethene	23.7	1.0	ug/l	
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l	
75-01-4	Vinyl chloride	104	1.0	ug/l	
	m,p-Xylene	ND	1.0	ug/l	
95-47-6	o-Xylene	ND	1.0	ug/l	
CAS No.	<b>Surrogate Recoveries</b>	Run# 1	Run# 2	Limits	

92%

ND = Not detected

1868-53-7

RL = Reporting Limit

E = Indicates value exceeds calibration range

Dibromofluoromethane

J = Indicates an estimated value

70-130%

B = Indicates analyte found in associated method blank N = Indicates presumptive evidence of a compound





Client Sample ID: 1136024

 Lab Sample ID:
 M87994-8
 Date Sampled:
 12/09/09

 Matrix:
 AQ - Ground Water
 Date Received:
 12/10/09

 Method:
 SW846 8260B
 Percent Solids:
 n/a

**Project:** UTC: 2009 Quarterly GW-Willow Pond

#### **VOA RCP List**

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
2037-26-5	Toluene-D8	97%		70-130%
460-00-4	4-Bromofluorobenzene	90%		70-130%

ND = Not detected

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank





Misc. Forms

Custody Documents and Other Forms

### Includes the following where applicable:

- Certification Exceptions
- Certification Exceptions (CT)
- Chain of Custody
- RCP Form
- Sample Tracking Chronicle



## **Parameter Certification Exceptions**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

The following parameters included in this report are exceptions to NELAC certification. The certification status of each is indicated below.

Parameter	CAS#	Method	Mat	Certification Status
Aroclor 1262	37324-23-5	SW846 8082	AQ	Certified by SOP MGC204/GC-ECD
Aroclor 1268	11100-14-4	SW846 8082	AQ	Certified by SOP MGC204/GC-ECD



Page 1 of 1



	CUTE			CH ₄₉		LOGY CE MARLBOR 08-481-62	NTER ROUGH	WES 1, MA	T •	BUII '52	LDIN	] G ON	D.	Y		ACCU ACCU	BZ TEST	JOB #: /200 QUOTE	,q -4 <u>६</u> •:	53	m	87994
	CLIENT INFO	RMATION				ILITY INF					11/11				A	ALY	ICAL	INFO	RMATIC	) NC		MATRIX CODES
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-	100 110	3000			LLECTION		×	99	Pf	RES	ERVA	TION	Ⅎℯ	i ti	·.^	>				- 1		SOL · OTHER SOLID
SAMPLE #	FIELD ID / PO	DINT OF COLLECT	ON	DATE	TIME	SAMPLED BY:	MATRIX	₽0 PE	₹	HOH	HZS04	NONE 1	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	2	PCB	RCRA						LAB USE ONLY
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M87994: Chain of Custody Page 1 of 2





# 4

#### **Accutest Laboratories Sample Receipt Summary**

Accutest Job Number: M87994 **Immediate Client Services Action Required:** Nο Date / Time Received: 12/10/2009 4:15:00 PM Client Service Action Required at Login: Nο No. Coolers: Project: Airbill #'s: **Cooler Security** Y or N Y or N **Sample Integrity - Documentation** Y or Ν 3. COC Present: V **v** 1. Custody Seals Present: 1 1. Sample labels present on bottles: 4. Smpl Dates/Time OK V ✓ 2. Custody Seals Intact: ✓ 2. Container labeling complete: 3. Sample container label / COC agree: ✓ Cooler Temperature Y or N 1. Temp criteria achieved: ✓ Y or N Sample Integrity - Condition Infared gun 2. Cooler temp verification: ✓ 1. Sample recvd within HT: 3. Cooler media: Ice (bag) **✓** 2. All containers accounted for: 3. Condition of sample: Intact **Quality Control Preservation** Y or N N/A 1. Trip Blank present / cooler: ✓ Sample Integrity - Instructions Y or N N/A **✓** 2. Trip Blank listed on COC: 1. Analysis requested is clear: ✓ 3. Samples preserved properly: **✓** 2. Bottles received for unspecified tests **✓** 4. VOCs headspace free: **✓** 3. Sufficient volume rec'd for analysis: **✓** 4. Compositing instructions clear: ✓ 5. Filtering instructions clear: ✓ Comments

> 495 Technology Center West, Bldg One F: 508.481.7753

Accutest Laboratories

V:508.481.6200

M87994: Chain of Custody Page 2 of 2

Marlborough, MA



#### **Reasonable Confidence Protocol Laboratory Analysis** QA/QC Certification Form

**Laboratory Name: Accutest New England** Client: Loureiro Eng. Associates

**Project Location:** Project Number: UTC: 2009 Quarterly GW-Willow Pond 88UT907

Sampling Date(s): 12/9/2009

M87994-1, M87994-2, M87994-3, M87994-4, M87994-5, M87994-6, M87994-7, M87994-Laboratory Sample ID(s):

Methods: CT-ETPH 7/06, SW846 6010B, SW846 7470A, SW846 8082, SW846 8260B For each analytical method referenced in this laboratory report package, were all specified QA/QC performance criteria followed, including the requirement to explain Yes 🔽 any criteria falling outside of acceptable guidelines, as specified in the CTDEP method-No 🗀 1 specific Reasonable Confidence Protocol Yes 🗹 Where all the method specified preservation and holding time requirements met? 1A No 1B Yes 🔲 No VPH and EPH mehods only: Was the VPH or EPH method conducted without significant modifications (See section 11.3 of respective methods) NA 🔽 Were all samples received by the laboratory in a condition consistent with 2 Yes 🗹 No 🗀 that described on the associated chain-of-custody document(s)? Yes 🗹 3 Were samples received at an appropriate temperature (<6° C)? No Were all QA/QC performance criteria specified in the CTDEP Reasonable Yes 🗀 굣 4 Nο Confidence Protocol documents achieved? ~ Yes 🗀 5 a) Were reporting limits specified or referenced on the chain-of-custody? No No 🗹 Yes 🗀 b) Were these reporting limits met? For each analytical method referenced in this laboratory report package. Yes 🗹 6 were results reported for all constituents identified in the method-specific No 🗀 analyte lists presented in the Reasonable Confidence Protocol documents? Are project-specific matrix spikes and laboratory duplicates included in this 7 Yes 🔽 No 🗀

Note: For all questions to which the response was "No" (with the exception of question #7), additional information must be provided in an attached narrative. If the answer to question #1, #1A or #1B is "No", the data package does not meet the requirements for "Reasonable Confidence".

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Authorized

Signature: Position: Lab Director

Printed Name: Reza Tand Date: 12/24/2009

Accutest New England



# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

**Job No:** M87994

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	Test Codes
M87994-1 1136019	Collected: 09-DEC-09	09:30 By: CSB	Receiv	ed: 10-DEC-	-09 By	: JB
M87994-1 M87994-1 M87994-1	SW846 8260B SW846 8082 CT-ETPH 7/06	17-DEC-09 17:58 23-DEC-09 02:18 23-DEC-09 12:22	SL	14-DEC-09 16-DEC-09		V8260RCP P8082RCP BCTTPH
M87994-2 1136019UF	Collected: 09-DEC-09	09:30 By: CSB	Receiv	red: 10-DEC-	-09 By	: JB
M87994-2	SW846 6010B	17-DEC-09 11:27	PY	14-DEC-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,S ZN
M87994-2	SW846 7470A	17-DEC-09 15:48	MA	17-DEC-09	MA	HG
M87994-3 1136020	Collected: 09-DEC-09	11:20 By: CSB	Receiv	red: 10-DEC-	-09 By	: ЈВ
M87994-3	SW846 8260B SW846 8082 CT-ETPH 7/06	17-DEC-09 18:26 23-DEC-09 03:02 23-DEC-09 13:02	SL	14-DEC-09 16-DEC-09		V8260RCP P8082RCP BCTTPH
M87994-4 1136020UF	Collected: 09-DEC-09	11:20 By: CSB	Receiv	red: 10-DEC-	-09 By	: JB
M87994-4	SW846 6010B	17-DEC-09 12:11	PY	14-DEC-09	EAL	AG, AS, BA, CD, CR, CU, NI, PB, S ZN
M87994-4	SW846 7470A	17-DEC-09 15:50	MA	17-DEC-09	MA	HG
M87994-5 1136021	Collected: 09-DEC-09	12:40 By: CSB	Receiv	red: 10-DEC-	-09 By	: ЈВ
M87994-5	SW846 8260B SW846 8082 CT-ETPH 7/06	17-DEC-09 18:54 23-DEC-09 03:32 23-DEC-09 13:41	SL	14-DEC-09 16-DEC-09		V8260RCP P8082RCP BCTTPH
M87994-6 1136021UF	Collected: 09-DEC-09	12:40 By: CSB	Receiv	red: 10-DEC-	-09 By	: ЈВ
M87994-6	SW846 6010B	17-DEC-09 12:15	PY	14-DEC-09	EAL	AG,AS,BA,CD,CR,CU,NI,PB,S ZN



# **Internal Sample Tracking Chronicle**

Loureiro Eng. Associates

M87994 Job No:

UTC: 2009 Quarterly GW-Willow Pond Project No: 88UT907

Sample Number	Method	Analyzed	Ву	Prepped	Ву	<b>Test Codes</b>
M87994-6	SW846 7470A	17-DEC-09 15:52	MA	17-DEC-09	MA	HG
M87994-7 1136025	Collected: 09-DEC-09	09:00 By: CSB	Receiv	ed: 10-DEC	-09 By	: JB
M87994-7	SW846 8260B	17-DEC-09 19:22	WC			V8260RCP
M87994-8 1136024	Collected: 09-DEC-09	13:45 By: CSB	Receiv	ed: 10-DEC	-09 By	: JB
M87994-8	SW846 8260B	17-DEC-09 19:50	WC			V8260RCP





## GC/MS Volatiles

# QC Data Summaries

# Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Internal Standard Area Summaries
- Surrogate Recovery Summaries



**Method:** SW846 8260B

## **Method Blank Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	<b>Prep Batch</b>	<b>Analytical Batch</b>
MSN1450-MB	N38674.D	1	12/17/09	WC	n/a	n/a	MSN1450

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
67-64-1	Acetone	ND	5.0	ug/l
107-13-1	Acrylonitrile	ND	25	ug/l
71-43-2	Benzene	ND	0.50	ug/l
108-86-1	Bromobenzene	ND	5.0	ug/l
75-27-4	Bromodichloromethane	ND	1.0	ug/l
75-25-2	Bromoform	ND	1.0	ug/l
74-83-9	Bromomethane	ND	2.0	ug/l
78-93-3	2-Butanone (MEK)	ND	5.0	ug/l
104-51-8	n-Butylbenzene	ND	5.0	ug/l
135-98-8	sec-Butylbenzene	ND	5.0	ug/l
98-06-6	tert-Butylbenzene	ND	5.0	ug/l
75-15-0	Carbon disulfide	ND	5.0	ug/l
56-23-5	Carbon tetrachloride	ND	1.0	ug/l
108-90-7	Chlorobenzene	ND	1.0	ug/l
75-00-3	Chloroethane	ND	2.0	ug/l
67-66-3	Chloroform	ND	1.0	ug/l
74-87-3	Chloromethane	ND	2.0	ug/l
95-49-8	o-Chlorotoluene	ND	5.0	ug/l
106-43-4	p-Chlorotoluene	ND	5.0	ug/l
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	ug/l
124-48-1	Dibromochloromethane	ND	1.0	ug/l
106-93-4	1,2-Dibromoethane	ND	2.0	ug/l
95-50-1	1,2-Dichlorobenzene	ND	1.0	ug/l
541-73-1	1,3-Dichlorobenzene	ND	1.0	ug/l
106-46-7	1,4-Dichlorobenzene	ND	1.0	ug/l
75-71-8	Dichlorodifluoromethane	ND	2.0	ug/l
75-34-3	1,1-Dichloroethane	ND	1.0	ug/l
107-06-2	1,2-Dichloroethane	ND	1.0	ug/l
75-35-4	1,1-Dichloroethene	ND	1.0	ug/l
156-59-2	cis-1,2-Dichloroethene	ND	1.0	ug/l
156-60-5	trans-1,2-Dichloroethene	ND	1.0	ug/l
78-87-5	1,2-Dichloropropane	ND	2.0	ug/l
142-28-9	1,3-Dichloropropane	ND	5.0	ug/l
594-20-7	2,2-Dichloropropane	ND	5.0	ug/l
563-58-6	1,1-Dichloropropene	ND	5.0	ug/l
10061-01-5	cis-1,3-Dichloropropene	ND	0.50	ug/l



**Method:** SW846 8260B

## **Method Blank Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	<b>Prep Batch</b>	<b>Analytical Batch</b>
MSN1450-MB	N38674.D	1	12/17/09	WC	n/a	n/a	MSN1450
WISIVI430-WID	N30074.D	1	12/17/07	WC	11/ a	11/α	MISINITS

The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
10061-02-6	trans-1,3-Dichloropropene	ND	0.50	ug/l
100-41-4	Ethylbenzene	ND	1.0	ug/l
76-13-1	Freon 113	ND	5.0	ug/l
87-68-3	Hexachlorobutadiene	ND	5.0	ug/l
591-78-6	2-Hexanone	ND	5.0	ug/l
98-82-8	Isopropylbenzene	ND	5.0	ug/l
99-87-6	p-Isopropyltoluene	ND	5.0	ug/l
1634-04-4	Methyl Tert Butyl Ether	ND	1.0	ug/l
108-10-1	4-Methyl-2-pentanone (MIBK)	ND	5.0	ug/l
74-95-3	Methylene bromide	ND	5.0	ug/l
75-09-2	Methylene chloride	ND	2.0	ug/l
91-20-3	Naphthalene	ND	5.0	ug/l
103-65-1	n-Propylbenzene	ND	5.0	ug/l
100-42-5	Styrene	ND	5.0	ug/l
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	ug/l
79-34-5	1,1,2,2-Tetrachloroethane	ND	1.0	ug/l
127-18-4	Tetrachloroethene	ND	1.0	ug/l
109-99-9	Tetrahydrofuran	ND	10	ug/l
108-88-3	Toluene	ND	1.0	ug/l
110-57-6	Trans-1,4-Dichloro-2-Butene	ND	5.0	ug/l
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	ug/l
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	ug/l
71-55-6	1,1,1-Trichloroethane	ND	1.0	ug/l
79-00-5	1,1,2-Trichloroethane	ND	1.0	ug/l
79-01-6	Trichloroethene	ND	1.0	ug/l
75-69-4	Trichlorofluoromethane	ND	1.0	ug/l
96-18-4	1,2,3-Trichloropropane	ND	5.0	ug/l
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	ug/l
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	ug/l
75-01-4	Vinyl chloride	ND	1.0	ug/l
	m,p-Xylene	ND	1.0	ug/l
95-47-6	o-Xylene	ND	1.0	ug/l



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**Method:** SW846 8260B

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## **Method Blank Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	<b>File ID</b>	<b>DF</b>	<b>Analyzed</b> 12/17/09	By	Prep Date	<b>Prep Batch</b>	Analytical Batch
MSN1450-MB	N38674.D	1		WC	n/a	n/a	MSN1450

#### The QC reported here applies to the following samples:

CAS No.	<b>Surrogate Recoveries</b>	Limits	
1868-53-7	Dibromofluoromethane	90%	70-130%
2037-26-5	Toluene-D8	96%	70-130%
460-00-4	4-Bromofluorobenzene	90%	70-130%



**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	Analytical Batch
MSN1450-BS	N38671.D	1	12/17/09	WC	n/a	n/a	MSN1450
MSN1450-BSD	N38672.D	1	12/17/09	WC	n/a	n/a	MSN1450

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	50	46.0	92	47.3	95	3	70-130/25
107-13-1	Acrylonitrile	250	206	82	205	82	0	70-130/25
71-43-2	Benzene	50	50.4	101	50.3	101	0	70-130/25
108-86-1	Bromobenzene	50	56.3	113	55.7	111	1	70-130/25
75-27-4	Bromodichloromethane	50	45.6	91	45.8	92	0	70-130/25
75-25-2	Bromoform	50	51.8	104	52.9	106	2	70-130/25
74-83-9	Bromomethane	50	48.8	98	49.3	99	1	70-130/25
78-93-3	2-Butanone (MEK)	50	44.3	89	44.4	89	0	70-130/25
104-51-8	n-Butylbenzene	50	52.3	105	51.8	104	1	70-130/25
135-98-8	sec-Butylbenzene	50	52.8	106	52.3	105	1	70-130/25
98-06-6	tert-Butylbenzene	50	51.4	103	51.4	103	0	70-130/25
75-15-0	Carbon disulfide	50	43.1	86	42.9	86	0	70-130/25
56-23-5	Carbon tetrachloride	50	50.3	101	50.5	101	0	70-130/25
108-90-7	Chlorobenzene	50	57.6	115	57.8	116	0	70-130/25
75-00-3	Chloroethane	50	42.9	86	42.1	84	2	70-130/25
67-66-3	Chloroform	50	48.0	96	47.4	95	1	70-130/25
74-87-3	Chloromethane	50	40.2	80	40.1	80	0	70-130/25
95-49-8	o-Chlorotoluene	50	50.2	100	49.5	99	1	70-130/25
106-43-4	p-Chlorotoluene	50	50.4	101	50.0	100	1	70-130/25
96-12-8	1,2-Dibromo-3-chloropropane	50	43.1	86	43.4	87	1	70-130/25
124-48-1	Dibromochloromethane	50	52.7	105	53.2	106	1	70-130/25
106-93-4	1,2-Dibromoethane	50	58.1	116	58.9	118	1	70-130/25
95-50-1	1,2-Dichlorobenzene	50	53.9	108	53.5	107	1	70-130/25
541-73-1	1,3-Dichlorobenzene	50	53.3	107	52.8	106	1	70-130/25
106-46-7	1,4-Dichlorobenzene	50	53.0	106	52.9	106	0	70-130/25
75-71-8	Dichlorodifluoromethane	50	30.4	61* a	30.3	61* a	0	70-130/25
75-34-3	1,1-Dichloroethane	50	46.7	93	46.0	92	2	70-130/25
107-06-2	1,2-Dichloroethane	50	52.1	104	51.7	103	1	70-130/25
75-35-4	1,1-Dichloroethene	50	45.1	90	44.2	88	2	70-130/25
156-59-2	cis-1,2-Dichloroethene	50	47.6	95	46.6	93	2	70-130/25
156-60-5	trans-1,2-Dichloroethene	50	44.6	89	43.8	88	2	70-130/25
78-87-5	1,2-Dichloropropane	50	50.9	102	50.8	102	0	70-130/25
142-28-9	1,3-Dichloropropane	50	54.3	109	54.9	110	1	70-130/25
594-20-7	2,2-Dichloropropane	50	48.4	97	46.9	94	3	70-130/25
563-58-6	1,1-Dichloropropene	50	52.5	105	52.6	105	0	70-130/25
10061-01-5	cis-1,3-Dichloropropene	50	46.6	93	47.0	94	1	70-130/25



**Method:** SW846 8260B

# Blank Spike/Blank Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample	File ID	DF	Analyzed	By	Prep Date	<b>Prep Batch</b>	<b>Analytical Batch</b>
MSN1450-BS	N38671.D	1	12/17/09	WC	n/a	n/a	MSN1450
MSN1450-BSD	N38672.D	1	12/17/09	WC	n/a	n/a	MSN1450

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	BSD ug/l	BSD %	RPD	Limits Rec/RPD
10061-02-6	trans-1,3-Dichloropropene	50	49.6	99	50.2	100	1	70-130/25
100-41-4	Ethylbenzene	50	55.2	110	55.7	111	1	70-130/25
76-13-1	Freon 113	50	49.6	99	48.6	97	2	70-130/25
87-68-3	Hexachlorobutadiene	50	58.0	116	57.3	115	1	70-130/25
591-78-6	2-Hexanone	50	46.2	92	47.4	95	3	70-130/25
98-82-8	Isopropylbenzene	50	61.3	123	60.6	121	1	70-130/25
99-87-6	p-Isopropyltoluene	50	55.2	110	54.9	110	1	70-130/25
1634-04-4	Methyl Tert Butyl Ether	50	44.9	90	45.0	90	0	70-130/25
108-10-1	4-Methyl-2-pentanone (MIBK)	50	44.7	89	45.5	91	2	70-130/25
74-95-3	Methylene bromide	50	52.3	105	52.5	105	0	70-130/25
75-09-2	Methylene chloride	50	42.8	86	42.6	85	0	70-130/25
91-20-3	Naphthalene	50	50.5	101	50.2	100	1	70-130/25
103-65-1	n-Propylbenzene	50	51.8	104	51.3	103	1	70-130/25
100-42-5	Styrene	50	56.3	113	56.8	114	1	70-130/25
630-20-6	1,1,1,2-Tetrachloroethane	50	59.0	118	59.0	118	0	70-130/25
79-34-5	1,1,2,2-Tetrachloroethane	50	47.9	96	47.9	96	0	70-130/25
127-18-4	Tetrachloroethene	50	64.9	130	65.3	131* a	1	70-130/25
109-99-9	Tetrahydrofuran	50	38.6	77	39.3	79	2	70-130/25
108-88-3	Toluene	50	53.2	106	53.5	107	1	70-130/25
110-57-6	Trans-1,4-Dichloro-2-Butene	50	47.6	95	48.1	96	1	70-130/25
87-61-6	1,2,3-Trichlorobenzene	50	51.4	103	51.6	103	0	70-130/25
120-82-1	1,2,4-Trichlorobenzene	50	53.3	107	53.4	107	0	70-130/25
71-55-6	1,1,1-Trichloroethane	50	50.4	101	50.0	100	1	70-130/25
79-00-5	1,1,2-Trichloroethane	50	51.3	103	51.9	104	1	70-130/25
79-01-6	Trichloroethene	50	53.9	108	53.9	108	0	70-130/25
75-69-4	Trichlorofluoromethane	50	44.9	90	44.1	88	2	70-130/25
96-18-4	1,2,3-Trichloropropane	50	44.7	89	44.6	89	0	70-130/25
95-63-6	1,2,4-Trimethylbenzene	50	50.2	100	50.0	100	0	70-130/25
108-67-8	1,3,5-Trimethylbenzene	50	52.4	105	52.1	104	1	70-130/25
75-01-4	Vinyl chloride	50	43.0	86	43.4	87	1	70-130/25
	m,p-Xylene	100	113	113	113	113	0	70-130/25
95-47-6	o-Xylene	50	58.5	117	58.7	117	0	70-130/25



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#### Page 3 of 3

**Method:** SW846 8260B

## Blank Spike/Blank Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
MSN1450-BS	N38671.D	1	12/17/09	WC	n/a	n/a	MSN1450
MSN1450-BSD	N38672.D	1	12/17/09	WC	n/a	n/a	MSN1450

#### The QC reported here applies to the following samples:

M87994-1, M87994-3, M87994-5, M87994-7, M87994-8

CAS No.	<b>Surrogate Recoveries</b>	BSP	BSD	Limits
2037-26-5	Dibromofluoromethane	91%	91%	70-130%
	Toluene-D8	96%	97%	70-130%
	4-Bromofluorobenzene	89%	88%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



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**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	Analytical Batch
M87989-4MS	N38685.D	5	12/17/09	WC	n/a	n/a	MSN1450
M87989-4MSD	N38686.D	5	12/17/09	WC	n/a	n/a	MSN1450
M87989-4	N38678.D	1	12/17/09	WC	n/a	n/a	MSN1450

The QC reported here applies to the following samples:

Acetone	CAS No.	Compound	M87989-4 ug/l	4 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
107-13-1   Acrylonitrile	67-64-1	Acetone	ND		250	215	86	216	86	0	70-130/30
T1-43-2   Benzene   ND   250   251   100   254   102   1   70-130/30   108-86-1   Bromodenzene   ND   250   273   109   277   111   1   70-130/30   75-25-2   Bromoform   ND   250   232   93   232   93   0   70-130/30   75-25-2   Bromoform   ND   250   251   100   257   103   2   70-130/30   74-83-9   Bromomethane   ND   250   251   100   257   103   2   70-130/30   78-93-3   2-Butanone (MEK)   ND   250   250   100   262   105   5   70-130/30   78-93-3   2-Butanone (MEK)   ND   250   252   101   256   102   2   70-130/30   104-51-8   n-Butylbenzene   ND   250   252   101   256   102   2   70-130/30   135-98-8   sec-Butylbenzene   ND   250   254   102   260   104   2   70-130/30   135-98-8   sec-Butylbenzene   ND   250   251   100   255   102   2   70-130/30   135-98-3   3-20-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30-30   30-30											
108-86-1   Bromobenzene   ND   250   273   109   277   111   1   70-130/30   75-27-4   Bromodichloromethane   ND   250   232   93   232   93   0   70-130/30   75-25-2   Bromoform   ND   250   251   100   257   103   2   70-130/30   74-83-9   Bromomethane   ND   250   250   100   262   105   5   70-130/30   78-93-3   2-Butanone (MEK)   ND   250   250   207   83   213   85   3   70-130/30   104-51-8   n-Butylbenzene   ND   250   252   101   256   102   2   70-130/30   104-51-8   sec-Butylbenzene   ND   250   254   102   260   104   2   70-130/30   88-06-6   tert-Butylbenzene   ND   250   251   100   255   102   2   70-130/30   75-15-0   Carbon disulfide   ND   250   251   100   255   102   2   70-130/30   108-90-7   Chlorobenzene   ND   250   253   113   85   217   87   2   70-130/30   75-00-3   Chloroethane   ND   250   283   113   288   115   2   70-130/30   75-49-8   O-Chlorothane   ND   250   244   98   246   98   1   70-130/30   95-49-8   O-Chlorothane   ND   250   244   98   246   98   1   70-130/30   104-48-1   Dibromochloromethane   ND   250   244   98   250   100   2   70-130/30   104-48-1   Dibromochloromethane   ND   250   244   98   250   100   2   70-130/30   104-48-1   Dibromochloromethane   ND   250   244   98   250   100   2   70-130/30   104-48-1   Dibromochloromethane   ND   250   244   98   250   100   2   70-130/30   104-48-1   Dibromochloromethane   ND   250   244   86   219   88   2   70-130/30   104-48-1   Dibromochloromethane   ND   250   248   99   250   100   1   70-130/30   106-46-7   1,2-Dibromochlane   ND   250   248   99   250   100   1   70-130/30   106-46-7   1,2-Dibromochlane   ND   250   259   104   263   105   2   70-130/30   106-46-7   1,2-Dibromochlane   ND   250   259   104   263   105   1   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   257   103   261   104   2   70-130/30   105-60-2   1,2-Dichlorobenzene   ND   250   257   103   261   104   2   70-130/30   105-60-2   1,2-Dichlorobenzene   ND   250   251   109   270   108   1   70-130/30   105-60-2   1,2-Dichloro		•									
75-27-4         Bromodichloromethane         ND         250         232         93         232         93         0         70-130/30           75-25-2         Bromoform         ND         250         251         100         257         103         2         70-130/30           74-83-9         Bromomethane         ND         250         250         100         262         105         5         70-130/30           78-93-3         2-Butanone (MEK)         ND         250         252         101         256         102         2         70-130/30           135-98-8         sec-Butylbenzene         ND         250         252         101         256         102         2         70-130/30           98-06-6         tert-Butylbenzene         ND         250         251         100         255         102         2         70-130/30           75-15-0         Carbon disulfide         ND         250         251         100         25         70-130/30           108-90-7         Chloroforme         ND         250         250         100         251         100         0         70-130/30           75-00-3         Chlorotehane         ND         250											
75-25-2         Bromoform         ND         250         251         100         257         103         2         70-130/30           74-83-9         Bromomethane         ND         250         250         100         262         105         5         70-130/30           78-93-3         2-Butanone (MEK)         ND         250         252         101         256         102         2         70-130/30           135-98-8         sec-Butylbenzene         ND         250         254         102         260         104         2         70-130/30           98-06-6         tert-Butylbenzene         ND         250         251         100         255         102         2         70-130/30           75-15-0         Carbon disulfide         ND         250         251         100         25         102         2         70-130/30           75-05-3         Carbon tetrachloride         ND         250         283         113         288         115         2         70-130/30           75-00-3         Chlorothane         ND         250         219         88         219         88         0         70-130/30           74-87-3         Chlorotoluene		Bromodichloromethane							93	0	
74-83-9         Bromomethane         ND         250         250         100         262         105         5         70-130/30           78-93-3         2-Butanone (MEK)         ND         250         207         83         213         85         3         70-130/30           104-51-8         n-Butylbenzene         ND         250         252         101         256         102         2         70-130/30           135-98-8         sec-Butylbenzene         ND         250         251         102         260         104         2         70-130/30           98-06-6         tert-Butylbenzene         ND         250         251         100         255         102         2         70-130/30           75-15-0         Carbon disulfide         ND         250         250         100         251         100         0         70-130/30           56-23-5         Carbon tetrachloride         ND         250         283         113         288         115         2         70-130/30           75-00-3         Chlorotene         ND         250         219         88         219         88         0         70-130/30           74-87-3         Chlorotoluene </td <td>75-25-2</td> <td></td> <td></td> <td></td> <td>250</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	75-25-2				250						
78-93-3         2-Butanone (MEK)         ND         250         207         83         213         85         3         70-130/30           104-51-8         n-Butylbenzene         ND         250         252         101         256         102         2         70-130/30           135-98-8         sec-Butylbenzene         ND         250         251         100         265         102         2         70-130/30           98-06-6         tetr-Butylbenzene         ND         250         251         100         255         102         2         70-130/30           75-15-0         Carbon disulfide         ND         250         250         100         251         100         0         70-130/30           56-23-5         Carbon tetrachloride         ND         250         283         113         288         115         2         70-130/30           75-00-3         Chlorobenzene         ND         250         283         113         288         115         2         70-130/30           67-66-3         Chloroform         ND         250         244         98         246         98         1         70-130/30           95-49-8         O-Chlorotoluen	74-83-9	Bromomethane	ND		250		100	262	105		70-130/30
104-51-8   n-Butylbenzene   ND   250   252   101   256   102   2   70-130/30   135-98-8   sec-Butylbenzene   ND   250   254   102   260   104   2   70-130/30   98-06-6   tert-Butylbenzene   ND   250   251   100   255   102   2   70-130/30   75-15-0   Carbon disulfide   ND   250   213   85   217   87   2   70-130/30   108-90-7   Chlorobenzene   ND   250   250   100   251   100   0   70-130/30   108-90-7   Chlorobenzene   ND   250   283   113   288   115   2   70-130/30   108-90-7   Chlorobenzene   ND   250   219   88   219   88   0   70-130/30   75-00-3   Chloroform   ND   250   219   88   219   88   0   70-130/30   74-87-3   Chloromethane   ND   250   244   98   246   98   1   70-130/30   74-87-3   Chloromethane   ND   250   244   98   250   100   2   70-130/30   106-43-4   p-Chlorotoluene   ND   250   244   98   250   100   2   70-130/30   96-12-8   1,2-Dibromo-3-chloropropane   ND   250   244   86   219   88   2   70-130/30   106-93-4   1,2-Dibromoethane   ND   250   259   104   263   105   2   70-130/30   106-93-4   1,2-Dibromoethane   ND   250   288   115   292   117   1   70-130/30   95-50-1   1,2-Dichlorobenzene   ND   250   262   105   267   107   2   70-130/30   541-73-1   1,3-Dichlorobenzene   ND   250   262   105   267   107   2   70-130/30   75-34-3   1,1-Dichlorobenzene   ND   250   234   94   236   94   1   70-130/30   75-34-3   1,1-Dichlorobenzene   ND   250   272   109   270   108   1   70-130/30   75-34-3   1,1-Dichlorobethane   ND   250   234   94   236   94   1   70-130/30   75-34-3   1,1-Dichlorobethane   ND   250   234   94   236   94   1   70-130/30   156-60-5   trans-1,2-Dichlorobethene   ND   250   257   103   261   104   2   70-130/30   156-60-5   trans-1,2-Dichloropethane   ND   250   235   94   239   96   2   70-130/30   156-60-5   trans-1,2-Dichloropethene   ND   250   253   89   233   89   0   70-130/30   156-60-5   trans-1,2-Dichloropethene   ND   250   257   103   261   104   2   70-130/30   163-63-66   1,1-Dichloropropane   ND   250   257   103   261   104   2   70-130/30   142-		2-Butanone (MEK)									
135-98-8   sec-Butylbenzene   ND   250   254   102   260   104   2   70-130/30   98-06-6   tert-Butylbenzene   ND   250   251   100   255   102   2   70-130/30   75-15-0   Carbon disulfide   ND   250   213   85   217   87   2   70-130/30   108-90-7   Chlorobenzene   ND   250   283   113   288   115   2   70-130/30   75-00-3   Chlorothane   ND   250   219   88   219   88   0   70-130/30   75-00-3   Chlorothane   ND   250   244   98   246   98   1   70-130/30   74-87-3   Chloromethane   ND   250   244   98   246   98   1   70-130/30   95-49-8   o-Chlorotoluene   ND   250   244   98   250   100   2   70-130/30   96-12-8   1,2-Dibromo-3-chloropropane   ND   250   244   86   219   88   2   70-130/30   124-48-1   Dibromochloromethane   ND   250   244   86   219   88   2   70-130/30   106-93-4   1,2-Dibromoethane   ND   250   248   99   250   100   1   70-130/30   106-93-4   1,2-Dibromoethane   ND   250   259   104   263   105   2   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   262   105   267   107   2   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   250   250   103   261   104   2   70-130/30   156-60-5   1,2-Dichloroethane   ND   250   234   94   236   94   1   70-130/30   156-60-5   1,2-Dichloroethane   ND   250   250   246   86   223   89   3   70-130/30   156-60-5   1,3-Dichloroethane   ND   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250   250	104-51-8	` /	ND		250		101	256	102		70-130/30
98-06-6         tert-Butylbenzene         ND         250         251         100         255         102         2         70-130/30           75-15-0         Carbon disulfide         ND         250         213         85         217         87         2         70-130/30           56-23-5         Carbon tetrachloride         ND         250         250         100         251         100         0         70-130/30           108-90-7         Chlorobenzene         ND         250         283         113         288         115         2         70-130/30           75-00-3         Chlorofema         ND         250         219         88         219         88         0         70-130/30           67-66-3         Chloromethane         ND         250         244         98         246         98         1         70-130/30           95-49-8         o-Chlorotoluene         ND         250         244         98         250         100         2         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         244         98         250         100         1         70-130/30           106-43-4         p-Chlorot	135-98-8	•	ND		250	254	102	260	104	2	70-130/30
75-15-0         Carbon disulfide         ND         250         213         85         217         87         2         70-130/30           56-23-5         Carbon tetrachloride         ND         250         250         100         251         100         0         70-130/30           75-00-3         Chlorobenzene         ND         250         219         88         219         88         0         70-130/30           67-66-3         Chloroform         ND         250         244         98         246         98         1         70-130/30           74-87-3         Chlorotoduene         ND         250         241         84         217         87         3         70-130/30           95-49-8         o-Chlorotoluene         ND         250         244         98         250         100         2         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         248         99         250         100         1         70-130/30           106-93-4         1,2-Dibromo-3-chloropropane         ND         250         259         104         263         105         2         70-130/30           95-50-1         1,	98-06-6		ND		250	251	100	255	102	2	70-130/30
108-90-7   Chlorobenzene   ND   250   283   113   288   115   2   70-130/30   75-00-3   Chloroethane   ND   250   219   88   219   88   0   70-130/30   67-66-3   Chloroform   ND   250   244   98   246   98   1   70-130/30   74-87-3   Chloromethane   ND   250   211   84   217   87   3   70-130/30   95-49-8   o-Chlorotoluene   ND   250   244   98   250   100   2   70-130/30   96-12-8   1,2-Dibromo-3-chloropropane   ND   250   244   86   219   88   2   70-130/30   124-48-1   Dibromochloromethane   ND   250   250   259   104   263   105   2   70-130/30   106-93-4   1,2-Dibromoethane   ND   250   288   115   292   117   1   70-130/30   95-50-1   1,2-Dichlorobenzene   ND   250   262   105   267   107   2   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   259   260   104   263   105   1   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   250   104   263   105   1   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   250   104   263   105   1   70-130/30   106-46-7   1,4-Dichlorobenzene   ND   250   257   103   261   104   2   70-130/30   75-34-3   1,1-Dichloroethane   ND   250   257   103   261   104   2   70-130/30   156-59-2   cis-1,2-Dichloroethene   ND   250   234   94   236   94   1   70-130/30   156-59-2   cis-1,2-Dichloroethene   ND   250   235   94   239   96   2   70-130/30   156-59-2   cis-1,2-Dichloroethene   ND   250   235   94   239   96   2   70-130/30   156-59-2   cis-1,2-Dichloroethene   ND   250   222   89   223   89   0   70-130/30   156-59-2   cis-1,2-Dichloroethene   ND   250   257   103   261   104   2   70-130/30   156-29-2   cis-1,2-Dichloroethene   ND   250   256   106   272   109   2   70-130/30   156-29-2   cis-1,2-Dichloroethene   ND   250   256   106   272   109   2   70-130/30   156-29-2   cis-1,2-Dichloroethene   ND   250   235   94   239   96   2   70-130/30   156-29-2   cis-1,2-Dichloroethene   ND   250   256   106   272   109   2   70-130/30   156-29-2   cis-1,2-Dichloroethene   ND   250   256   106   272   109   2   70-130/30   156-29-2   cis-1,2-Dichloroethene   ND											
75-00-3         Chloroethane         ND         250         219         88         219         88         0         70-130/30           67-66-3         Chloroform         ND         250         244         98         246         98         1         70-130/30           74-87-3         Chlorotoluene         ND         250         211         84         217         87         3         70-130/30           95-49-8         o-Chlorotoluene         ND         250         244         98         250         100         2         70-130/30           106-43-4         p-Chlorotoluene         ND         250         248         99         250         100         1         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         248         99         250         100         1         70-130/30           124-48-1         Dibromochloromethane         ND         250         259         104         263         105         2         70-130/30           106-93-4         1,2-Dichlorobenzene         ND         250         259         104         263         105         1         70-130/30           541-73-1         1,3-Dich	56-23-5	Carbon tetrachloride	ND		250	250	100	251	100	0	70-130/30
75-00-3         Chloroethane         ND         250         219         88         219         88         0         70-130/30           67-66-3         Chloroform         ND         250         244         98         246         98         1         70-130/30           74-87-3         Chlorotoluene         ND         250         211         84         217         87         3         70-130/30           95-49-8         o-Chlorotoluene         ND         250         244         98         250         100         2         70-130/30           106-43-4         p-Chlorotoluene         ND         250         248         99         250         100         1         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         214         86         219         88         2         70-130/30           124-48-1         Dibromochloromethane         ND         250         259         104         263         105         2         70-130/30           106-93-4         1,2-Dibromochlane         ND         250         258         115         292         117         1         70-130/30           541-73-1         1,3-Dichlor	108-90-7	Chlorobenzene	ND		250	283	113	288	115	2	70-130/30
74-87-3         Chloromethane         ND         250         211         84         217         87         3         70-130/30           95-49-8         o-Chlorotoluene         ND         250         244         98         250         100         2         70-130/30           106-43-4         p-Chlorotoluene         ND         250         248         99         250         100         1         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         214         86         219         88         2         70-130/30           124-48-1         Dibromochloromethane         ND         250         259         104         263         105         2         70-130/30           106-93-4         1,2-Dibrhorobenzene         ND         250         288         115         292         117         1         70-130/30           95-50-1         1,2-Dichlorobenzene         ND         250         262         105         267         107         2         70-130/30           541-73-1         1,3-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8	75-00-3	Chloroethane	ND		250		88	219	88	0	70-130/30
95-49-8         o-Chlorotoluene         ND         250         244         98         250         100         2         70-130/30           106-43-4         p-Chlorotoluene         ND         250         248         99         250         100         1         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         214         86         219         88         2         70-130/30           124-48-1         Dibromochloromethane         ND         250         259         104         263         105         2         70-130/30           106-93-4         1,2-Dibromoethane         ND         250         288         115         292         117         1         70-130/30           95-50-1         1,2-Dichlorobenzene         ND         250         262         105         267         107         2         70-130/30           541-73-1         1,3-Dichlorobenzene         ND         250         260         104         263         105         1         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         257         103         261         104         2         70-130/30           75-3	67-66-3	Chloroform	ND		250	244	98	246	98	1	70-130/30
106-43-4         p-Chlorotoluene         ND         250         248         99         250         100         1         70-130/30           96-12-8         1,2-Dibromo-3-chloropropane         ND         250         214         86         219         88         2         70-130/30           124-48-1         Dibromochloromethane         ND         250         259         104         263         105         2         70-130/30           106-93-4         1,2-Dibromoethane         ND         250         288         115         292         117         1         70-130/30           95-50-1         1,2-Dichlorobenzene         ND         250         262         105         267         107         2         70-130/30           541-73-1         1,3-Dichlorobenzene         ND         250         260         104         263         105         1         70-130/30           106-46-7         1,4-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         234         94         236         94         1         70-130/30	74-87-3	Chloromethane	ND		250	211	84	217	87	3	70-130/30
96-12-8 1,2-Dibromo-3-chloropropane ND 250 214 86 219 88 2 70-130/30 124-48-1 Dibromochloromethane ND 250 259 104 263 105 2 70-130/30 106-93-4 1,2-Dibromoethane ND 250 288 115 292 117 1 70-130/30 95-50-1 1,2-Dichlorobenzene ND 250 262 105 267 107 2 70-130/30 541-73-1 1,3-Dichlorobenzene ND 250 260 104 263 105 1 70-130/30 106-46-7 1,4-Dichlorobenzene ND 250 257 103 261 104 2 70-130/30 75-71-8 Dichlorodifluoromethane ND 250 146 58* a 148 59* a 1 70-130/30 75-34-3 1,1-Dichloroethane ND 250 234 94 236 94 1 70-130/30 107-06-2 1,2-Dichloroethane ND 250 272 109 270 108 1 70-130/30 75-35-4 1,1-Dichloroethene ND 250 216 86 223 89 3 70-130/30 156-59-2 cis-1,2-Dichloroethene ND 250 235 94 239 96 2 70-130/30 156-60-5 trans-1,2-Dichloroethene ND 250 253 101 258 103 2 70-130/30 78-87-5 1,2-Dichloropropane ND 250 253 101 258 103 2 70-130/30 142-28-9 1,3-Dichloropropane ND 250 238 95 237 95 0 70-130/30 594-20-7 2,2-Dichloropropane ND 250 238 95 237 95 0 70-130/30 563-58-6 1,1-Dichloropropane ND 250 257 103 261 104 2 70-130/30	95-49-8	o-Chlorotoluene	ND		250	244	98	250	100	2	70-130/30
124-48-1         Dibromochloromethane         ND         250         259         104         263         105         2         70-130/30           106-93-4         1,2-Dibromoethane         ND         250         288         115         292         117         1         70-130/30           95-50-1         1,2-Dichlorobenzene         ND         250         262         105         267         107         2         70-130/30           541-73-1         1,3-Dichlorobenzene         ND         250         260         104         263         105         1         70-130/30           106-46-7         1,4-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         257         103         261         104         2         70-130/30           75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         272         109         270         108         1         70-130/30           156-	106-43-4	p-Chlorotoluene	ND		250	248	99	250	100	1	70-130/30
106-93-4         1,2-Dibromoethane         ND         250         288         115         292         117         1         70-130/30           95-50-1         1,2-Dichlorobenzene         ND         250         262         105         267         107         2         70-130/30           541-73-1         1,3-Dichlorobenzene         ND         250         260         104         263         105         1         70-130/30           106-46-7         1,4-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         146         58* a 148         59* a 1         70-130/30           75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         272         109         270         108         1         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           78-87-5         1,2-Dichl	96-12-8	1,2-Dibromo-3-chloropropane	ND		250	214	86	219	88	2	70-130/30
95-50-1         1,2-Dichlorobenzene         ND         250         262         105         267         107         2         70-130/30           541-73-1         1,3-Dichlorobenzene         ND         250         260         104         263         105         1         70-130/30           106-46-7         1,4-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         146         58* a         148         59* a         1         70-130/30           75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           107-06-2         1,2-Dichloroethane         ND         250         272         109         270         108         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           7	124-48-1	Dibromochloromethane	ND		250	259	104	263	105	2	70-130/30
541-73-1         1,3-Dichlorobenzene         ND         250         260         104         263         105         1         70-130/30           106-46-7         1,4-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         146         58* a         148         59* a         1         70-130/30           75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           107-06-2         1,2-Dichloroethane         ND         250         272         109         270         108         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           <	106-93-4	1,2-Dibromoethane	ND		250	288	115	292	117	1	70-130/30
106-46-7         1,4-Dichlorobenzene         ND         250         257         103         261         104         2         70-130/30           75-71-8         Dichlorodifluoromethane         ND         250         146         58* a         148         59* a         1         70-130/30           75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           107-06-2         1,2-Dichloroethane         ND         250         272         109         270         108         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30 <t< td=""><td>95-50-1</td><td>1,2-Dichlorobenzene</td><td>ND</td><td></td><td>250</td><td>262</td><td>105</td><td>267</td><td>107</td><td>2</td><td>70-130/30</td></t<>	95-50-1	1,2-Dichlorobenzene	ND		250	262	105	267	107	2	70-130/30
75-71-8         Dichlorodifluoromethane         ND         250         146         58* a         148         59* a         1         70-130/30           75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           107-06-2         1,2-Dichloroethane         ND         250         272         109         270         108         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30 <t< td=""><td>541-73-1</td><td>1,3-Dichlorobenzene</td><td>ND</td><td></td><td>250</td><td>260</td><td>104</td><td>263</td><td>105</td><td>1</td><td>70-130/30</td></t<>	541-73-1	1,3-Dichlorobenzene	ND		250	260	104	263	105	1	70-130/30
75-34-3         1,1-Dichloroethane         ND         250         234         94         236         94         1         70-130/30           107-06-2         1,2-Dichloroethane         ND         250         272         109         270         108         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30           594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-	106-46-7	1,4-Dichlorobenzene	ND		250	257	103	261	104	2	70-130/30
107-06-2         1,2-Dichloroethane         ND         250         272         109         270         108         1         70-130/30           75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30           594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-6         1,1-Dichloropropene         ND         250         257         103         261         104         2         70-130/30	75-71-8	Dichlorodifluoromethane	ND		250	146	58* a	148	59* a	1	70-130/30
75-35-4         1,1-Dichloroethene         ND         250         216         86         223         89         3         70-130/30           156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30           594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-6         1,1-Dichloropropene         ND         250         257         103         261         104         2         70-130/30	75-34-3	1,1-Dichloroethane	ND		250	234	94	236	94	1	70-130/30
156-59-2         cis-1,2-Dichloroethene         ND         250         235         94         239         96         2         70-130/30           156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30           594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-6         1,1-Dichloropropene         ND         250         257         103         261         104         2         70-130/30	107-06-2	1,2-Dichloroethane	ND		250	272	109	270	108	1	70-130/30
156-60-5         trans-1,2-Dichloroethene         ND         250         222         89         223         89         0         70-130/30           78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30           594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-6         1,1-Dichloropropene         ND         250         257         103         261         104         2         70-130/30	75-35-4	1,1-Dichloroethene	ND		250	216	86	223	89	3	70-130/30
78-87-5         1,2-Dichloropropane         ND         250         253         101         258         103         2         70-130/30           142-28-9         1,3-Dichloropropane         ND         250         266         106         272         109         2         70-130/30           594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-6         1,1-Dichloropropene         ND         250         257         103         261         104         2         70-130/30	156-59-2	cis-1,2-Dichloroethene	ND		250	235	94	239	96	2	70-130/30
142-28-9     1,3-Dichloropropane     ND     250     266     106     272     109     2     70-130/30       594-20-7     2,2-Dichloropropane     ND     250     238     95     237     95     0     70-130/30       563-58-6     1,1-Dichloropropene     ND     250     257     103     261     104     2     70-130/30	156-60-5	trans-1,2-Dichloroethene	ND		250	222	89	223	89	0	70-130/30
594-20-7         2,2-Dichloropropane         ND         250         238         95         237         95         0         70-130/30           563-58-6         1,1-Dichloropropene         ND         250         257         103         261         104         2         70-130/30	78-87-5	1,2-Dichloropropane	ND		250	253	101	258	103	2	70-130/30
563-58-6 1,1-Dichloropropene ND 250 257 103 261 104 2 70-130/30	142-28-9	1,3-Dichloropropane	ND		250	266	106	272	109	2	70-130/30
'	594-20-7	2,2-Dichloropropane	ND		250	238	95	237	95	0	70-130/30
10061-01-5 cis-1,3-Dichloropropene ND 250 232 93 234 94 1 70-130/30	563-58-6	1,1-Dichloropropene	ND		250	257	103	261	104	2	70-130/30
- •	10061-01-5	cis-1,3-Dichloropropene	ND		250	232	93	234	94	1	70-130/30



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**Method:** SW846 8260B

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
M87989-4MS	N38685.D	5	12/17/09	WC	n/a	n/a	MSN1450
M87989-4MSD	N38686.D	5	12/17/09	WC	n/a	n/a	MSN1450
M87989-4	N38678.D	1	12/17/09	WC	n/a	n/a	MSN1450

The QC reported here applies to the following samples:

CAS No.	Compound	M87989- ug/l	-4 Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
10061 02 6	trans-1,3-Dichloropropene	ND		250	251	100	249	100	1	70-130/30
100-41-4	Ethylbenzene	ND ND		250	271	108	276	110	2	70-130/30
76-13-1	Freon 113	ND ND		250	229	92	232	93	1	70-130/30
87-68-3	Hexachlorobutadiene	ND		250	270	108	279	112	3	70-130/30
591-78-6	2-Hexanone	ND		250	228	91	233	93	2	70-130/30
98-82-8	Isopropylbenzene	ND		250	295	118	301	120	2	70-130/30
99-87-6	p-Isopropyltoluene	ND		250	269	108	272	109	1	70-130/30
1634-04-4	Methyl Tert Butyl Ether	ND		250	227	91	228	91	0	70-130/30
108-10-1	4-Methyl-2-pentanone (MIBK)			250	232	93	232	93	0	70-130/30
74-95-3	Methylene bromide	ND		250	267	107	268	107	0	70-130/30
75-09-2	Methylene chloride	ND		250	216	86	219	88	1	70-130/30
91-20-3	Naphthalene	ND		250	241	96	251	100	4	70-130/30
103-65-1	n-Propylbenzene	ND		250	252	101	256	102	2	70-130/30
100-42-5	Styrene	ND		250	275	110	282	113	3	70-130/30
630-20-6	1,1,1,2-Tetrachloroethane	ND		250	288	115	292	117	1	70-130/30
79-34-5	1,1,2,2-Tetrachloroethane	ND		250	236	94	240	96	2	70-130/30
127-18-4	Tetrachloroethene	ND		250	308	123	313	125	2	70-130/30
109-99-9	Tetrahydrofuran	ND		250	202	81	203	81	0	70-130/30
108-88-3	Toluene	ND		250	266	106	269	108	1	70-130/30
110-57-6	Trans-1,4-Dichloro-2-Butene	ND		250	232	93	233	93	0	70-130/30
87-61-6	1,2,3-Trichlorobenzene	ND		250	246	98	254	102	3	70-130/30
120-82-1	1,2,4-Trichlorobenzene	ND		250	255	102	263	105	3	70-130/30
71-55-6	1,1,1-Trichloroethane	ND		250	253	101	258	103	2	70-130/30
79-00-5	1,1,2-Trichloroethane	ND		250	260	104	258	103	1	70-130/30
79-01-6	Trichloroethene	ND		250	269	108	274	110	2	70-130/30
75-69-4	Trichlorofluoromethane	ND		250	215	86	218	87	1	70-130/30
96-18-4	1,2,3-Trichloropropane	ND		250	218	87	221	88	1	70-130/30
95-63-6	1,2,4-Trimethylbenzene	ND		250	245	98	248	99	1	70-130/30
108-67-8	1,3,5-Trimethylbenzene	ND		250	255	102	260	104	2	70-130/30
75-01-4	Vinyl chloride	ND		250	219	88	224	90	2	70-130/30
	m,p-Xylene	ND		500	549	110	565	113	3	70-130/30
95-47-6	o-Xylene	ND		250	287	115	294	118	2	70-130/30



# 5.3

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**Method:** SW846 8260B

## Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Bv	Prep Date	Prep Batch	Analytical Batch
M87989-4MS	N38685.D	5	12/17/09	WC	n/a	n/a	MSN1450
M87989-4MSD	N38686.D	5	12/17/09	WC	n/a	n/a	MSN1450
M87989-4	N38678.D	1	12/17/09	WC	n/a	n/a	MSN1450

#### The QC reported here applies to the following samples:

M87994-1, M87994-3, M87994-5, M87994-7, M87994-8

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M87989-4	Limits
1868-53-7	Dibromofluoromethane	92%	92%	91%	70-130%
2037-26-5	Toluene-D8	98%	97%	96%	70-130%
460-00-4	4-Bromofluorobenzene	88%	88%	90%	70-130%

(a) Outside control limits. Blank Spike meets program technical requirements.



## **Volatile Internal Standard Area Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

 Check Std:
 MSN1450-CC1437
 Injection Date:
 12/17/09

 Lab File ID:
 N38670.D
 Injection Time:
 09:33

**Instrument ID:** GCMSN **Method:** SW846 8260B

	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
Check Std Upper Limit ^a Lower Limit ^b	202132 404264 101066	8.64 9.14 8.14	319651 639302 159826	9.50 10.00 9.00	148988 297976 74494	12.74 13.24 12.24	148217 296434 74109	15.80	79768 159536 39884	6.22 6.72 5.72
Lab Sample ID	IS 1 AREA	RT	IS 2 AREA	RT	IS 3 AREA	RT	IS 4 AREA	RT	IS 5 AREA	RT
MSN1450-BS MSN1450-BSD MSN1450-MB ZZZZZZ ZZZZZZ ZZZZZZ M87989-4 ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZZZ ZZZZ	202906 204683 200952 195280 196132 192426 189538 189374 189862 187155 185643 185604 185105 189541 193676 188311 186338	8.64 8.64 8.64 8.64 8.64 8.64 8.64 8.64	324162 322842 318729 311669 308087 303479 302784 303026 296957 298111 295164 295153 296287 302414 309612 298386 296862	9.50 9.50 9.50 9.50 9.50 9.50 9.50 9.50	150278 148919 142342 140035 139634 137256 137794 136663 135332 135540 136003 135308 134890 143869 144856 135607 135686	12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.75 12.74 12.75 12.75 12.75 12.75 12.75	146451 147352 138361 136588 135395 132787 132622 133619 130775 131944 131362 129840 129979 141388 143050 131576 131503	15.30 15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.31 15.30 15.30 15.30 15.31 15.30 15.31	79827 82947 79517 80878 75569 80416 80781 78522 80507 77102 80747 77534 76926 79019 79101 80649 74589	6.22 6.22 6.22 6.22 6.22 6.22 6.22 6.22
M87994-5 M87994-7 M87994-8	186003 184677 183163	8.64 8.64 8.64	295640 295999 294011	9.50 9.50 9.50	135617 134481 133271	12.75 12.74 12.75	129552 128088 128770	15.30 15.30 15.30	83453 70757 77537	6.22 6.22 6.22

IS 1 = Pentafluorobenzene
IS 2 = 1,4-Difluorobenzene
IS 3 = Chlorobenzene-D5
IS 4 = 1,4-Dichlorobenzene-d4
IS 5 = Tert Butyl Alcohol-D9

- (a) Upper Limit = +100% of check standard area; Retention time +0.5 minutes.
- (b) Lower Limit = -50% of check standard area; Retention time -0.5 minutes.



## **Volatile Surrogate Recovery Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

**Method:** SW846 8260B Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	Lab			
Sample ID	File ID	<b>S1</b>	S2	S3
M87994-1	N38688.D	90.0	97.0	90.0
M87994-3	N38689.D	91.0	97.0	89.0
M87994-5	N38690.D	91.0	97.0	90.0
M87994-7	N38691.D	91.0	97.0	91.0
M87994-8	N38692.D	92.0	97.0	90.0
M87989-4MS	N38685.D	92.0	98.0	88.0
M87989-4MSD	N38686.D	92.0	97.0	88.0
MSN1450-BS	N38671.D	91.0	96.0	89.0
MSN1450-BSD	N38672.D	91.0	97.0	88.0
MSN1450-MB	N38674.D	90.0	96.0	90.0

Surrogate Recovery Compounds Limits

S1 = Dibromofluoromethane70-130% S2 = Toluene-D870-130% S3 = 4-Bromofluorobenzene 70-130%





# GC Semi-volatiles

# QC Data Summaries

## Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries
- Surrogate Recovery Summaries



**Method:** CT-ETPH 7/06

## **Method Blank Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20208-MB	<b>File ID</b> BC35644.D	<b>DF</b> 1	<b>Analyzed</b> 12/18/09	By KD	<b>Prep Date</b> 12/16/09	Prep Batch OP20208	Analytical Batch GBC1822

The QC reported here applies to the following samples:

M87994-1, M87994-3, M87994-5

CAS No. Compound Result RL Units Q

CT-DRO (C9-C36) ND 0.080 mg/l

CAS No. Surrogate Recoveries Limits

3386-33-2 1-Chlorooctadecane 108% 50-149%



**Method:** SW846 8082

## **Method Blank Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	Ву	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP20193-MB	EF72276.D	1	12/18/09	SL	12/14/09	OP20193	GEF3312

#### The QC reported here applies to the following samples:

CAS No.	Compound	Result	RL	Units Q
12674-11-2	Aroclor 1016	ND	0.25	ug/l
11104-28-2	Aroclor 1221	ND	0.25	ug/l
11141-16-5	Aroclor 1232	ND	0.25	ug/l
53469-21-9	Aroclor 1242	ND	0.25	ug/l
12672-29-6	Aroclor 1248	ND	0.25	ug/l
11097-69-1	Aroclor 1254	ND	0.25	ug/l
11096-82-5	Aroclor 1260	ND	0.25	ug/l
37324-23-5	Aroclor 1262	ND	0.25	ug/l
11100-14-4	Aroclor 1268	ND	0.25	ug/l

CAS No.	Surrogate Recoveries	Limits	
877-09-8	Tetrachloro-m-xylene	88%	30-150%
877-09-8	Tetrachloro-m-xylene	89%	30-150%
2051-24-3	Decachlorobiphenyl	76%	30-150%
2051-24-3	Decachlorobiphenyl	75%	30-150%



**Method:** CT-ETPH 7/06

## **Blank Spike Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample OP20208-BS	File ID BC35646.D	<b>DF</b> 1	<b>Analyzed</b> 12/18/09	By KD	<b>Prep Date</b> 12/16/09	Prep Batch OP20208	Analytical Batch GBC1822

The QC reported here applies to the following samples:

M87994-1, M87994-3, M87994-5

CAS No.	Compound	Spike mg/l	BSP mg/l	BSP %	Limits
	CT-DRO (C9-C36)	0.7	0.551	79	60-120

CAS No. Surrogate Recoveries BSP Limits
3386-33-2 1-Chlorooctadecane 109% 50-149%



**Method:** SW846 8082

# Blank Spike Summary Job Number: M87994

Account: LEA Loureiro Eng. Associates

UTC: 2009 Quarterly GW-Willow Pond **Project:** 

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	<b>Analytical Batch</b>
OP20193-BS	EF72277.D	1	12/18/09	SL	12/14/09	OP20193	GEF3312

The QC reported here applies to the following samples:

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
12674-11-2	Aroclor 1016	2	2.0	100	40-140
11104-28-2	Aroclor 1221		ND		40-140
11141-16-5	Aroclor 1232		ND		40-140
53469-21-9	Aroclor 1242		ND		40-140
12672-29-6	Aroclor 1248		ND		40-140
11097-69-1	Aroclor 1254		ND		40-140
11096-82-5	Aroclor 1260	2	1.9	95	40-140
37324-23-5	Aroclor 1262		ND		40-140
11100-14-4	Aroclor 1268		ND		40-140

CAS No.	<b>Surrogate Recoveries</b>	BSP	Limits
877-09-8	Tetrachloro-m-xylene	110%	30-150%
877-09-8	Tetrachloro-m-xylene	115%	30-150%
2051-24-3	Decachlorobiphenyl	81%	30-150%
2051-24-3	Decachlorobiphenyl	80%	30-150%



**Method:** CT-ETPH 7/06

# 3.1

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	<b>Prep Date</b>	Prep Batch	<b>Analytical Batch</b>
OP20208-MS	BC35648.D	1	12/18/09	KD	12/16/09	OP20208	GBC1822
OP20208-MSD	BC35650.D	1	12/18/09	KD	12/16/09	OP20208	GBC1822
M88079-8	BC35652.D	1	12/18/09	KD	12/16/09	OP20208	GBC1822

The QC reported here applies to the following samples:

CAS No.	Compound	M88079-8 mg/l Q	Spike mg/l	MS mg/l	MS %	MSD mg/l	MSD %	RPD	Limits Rec/RPD
	CT-DRO (C9-C36)	ND	0.7	0.494	71	0.489	70	1	50-129/26
CAS No.	Surrogate Recoveries	MS	MSD	M88	8079-8	Limits			
3386-33-2	1-Chlorooctadecane	93%	94%	98%	)	50-149%	)		



**Method:** SW846 8082

# Matrix Spike/Matrix Spike Duplicate Summary

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP20193-MS	EF72279.D	1	12/18/09	SL	12/14/09	OP20193	GEF3312
OP20193-MSD	EF72280.D	1	12/18/09	SL	12/14/09	OP20193	GEF3312
M87925-22	EF72281.D	1	12/18/09	SL	12/14/09	OP20193	GEF3312

The QC reported here applies to the following samples:

CAS No. Compound	M87925-22 ug/l Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
12674-11-2 Aroclor 1016	ND	2.5	2.6	104	2.3	92	12	40-140/50
11104-28-2 Aroclor 1221	ND		ND		ND		nc	40-140/50
11141-16-5 Aroclor 1232	ND		ND		ND		nc	40-140/50
53469-21-9 Aroclor 1242	ND		ND		ND		nc	40-140/50
12672-29-6 Aroclor 1248	ND		ND		ND		nc	40-140/50
11097-69-1 Aroclor 1254	ND		ND		ND		nc	40-140/50
11096-82-5 Aroclor 1260	ND	2.5	2.3	92	2.2	88	4	40-140/50
37324-23-5 Aroclor 1262	ND		ND		ND		nc	40-140/50
11100-14-4 Aroclor 1268	ND		ND		ND		nc	40-140/50

CAS No.	<b>Surrogate Recoveries</b>	MS	MSD	M87925-22	Limits
877-09-8	Tetrachloro-m-xylene	114%	101%	89%	30-150%
877-09-8	Tetrachloro-m-xylene	117%	101%	97%	30-150%
2051-24-3	Decachlorobiphenyl	53%	62%	56%	30-150%
2051-24-3	Decachlorobiphenyl	51%	56%	55%	30-150%



## **Semivolatile Surrogate Recovery Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

**Project:** UTC: 2009 Quarterly GW-Willow Pond

Method: CT-ETPH 7/06 Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	Lab	
Sample ID	File ID	<b>S1</b> ^a
M87994-1	BC35800.D	81.0
M87994-3	BC35802.D	82.0
M87994-5	BC35804.D	71.0
OP20208-BS	BC35646.D	109.0
OP20208-MB	BC35644.D	108.0
OP20208-MS	BC35648.D	93.0
OP20208-MSD	BC35650.D	94.0

Surrogate Recovery Compounds Limits

S1 = 1-Chlorooctadecane 50-149%

(a) Recovery from GC signal #1



## **Semivolatile Surrogate Recovery Summary**

Job Number: M87994

Account: LEA Loureiro Eng. Associates

Project: UTC: 2009 Quarterly GW-Willow Pond

**Method:** SW846 8082 Matrix: AQ

#### Samples and QC shown here apply to the above method

Lab	Lab				
Sample ID	File ID	<b>S1</b> a	<b>S1</b> b	<b>S2</b> a	<b>S2</b> b
M87994-1	EF72388.D	59.0	88.0	94.0	97.0
M87994-3	EF72389.D	99.0	107.0	92.0	92.0
M87994-5	EF72390.D	83.0	93.0	82.0	81.0
OP20193-BS	EF72277.D	110.0	115.0	81.0	80.0
OP20193-MB	EF72276.D	88.0	89.0	76.0	75.0
OP20193-MS	EF72279.D	114.0	117.0	53.0	51.0
OP20193-MSD	EF72280.D	101.0	101.0	62.0	56.0

Surrogate Recovery Compounds Limits

S1 = Tetrachloro-m-xylene30-150% **S2** = Decachlorobiphenyl 30-150%

(a) Recovery from GC signal #1 (b) Recovery from GC signal #2





# Metals Analysis

# QC Data Summaries

# Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

#### Login Number: M87994 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Matrix Type: AQUEOUS Methods: SW846 6010B

Units: ug/l

Prep Date:

12/14/09

Prep Date.					12/14/09
Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	27	40		
Antimony	6.0	1.4	1.6		
Arsenic	10	1	1.8	0.0	<10
Barium	200	.57	1.1	3.9	<200
Beryllium	4.0	.15	. 4		
Boron	100	.65	2.3		
Cadmium	4.0	. 24	1.9	-0.20	<4.0
Calcium	5000	7.6	15		
Chromium	10	.81	1.1	-0.10	<10
Cobalt	50	. 25	.3		
Copper	25	2.2	4	-0.70	<25
Gold	50	1.1	4.2		
Iron	100	3.7	13		
Lead	5.0	1.1	2.7	-0.80	<5.0
Magnesium	5000	37	77		
Manganese	15	.12	1.1		
Molybdenum	100	. 22	.8		
Nickel	40	. 24	1.3	-0.20	<40
Palladium	50	2.2	4		
Platinum	50	9.3	13		
Potassium	5000	39	46		
Selenium	10	1.9	3.5	0.60	<10
Silicon	100	8.9	36		
Silver	5.0	.54	1.3	0.20	<5.0
Sodium	5000	61	160		
Strontium	10	. 24	.3		
Thallium	10	1.2	1.3		
Tin	100	.65	1.3		
Titanium	50	.74	.8		
Tungsten	100	5.6	8		
Vanadium	30	.68	1.6		
Zinc	20	.74	1.5	-0.70	<20

Associated samples MP14587: M87994-2, M87994-4, M87994-6



#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M87994

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87994
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/14/09 12/14/09

Prep Date:				12/14/09				12/14/09	
Metal	M87994-2 Original		Spikelot MPICP	% Rec	QC Limits	M87994-2 Original		RPD	QC Limits
Aluminum									
Antimony	anr								
Arsenic	0.0	516	500	103.2	75-125	0.0	0.0	NC	0-20
Barium	82.2	2020	2000	96.9	75-125	82.2	82.0	0.2	0-20
Beryllium	anr								
Boron									
Cadmium	0.0	513	500	102.6	75-125	0.0	0.0	NC	0-20
Calcium									
Chromium	0.0	465	500	93.0	75-125	0.0	1.0	200.0(a)	0-20
Cobalt									
Copper	0.0	497	500	99.4	75-125	0.0	2.7	200.0(a)	0-20
Gold									
Iron	anr								
Lead	0.0	993	1000	99.3	75-125	0.0	0.0	NC	0-20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	0.0	490	500	98.0	75-125	0.0	0.0	NC	0-20
Palladium									
Platinum									
Potassium									
Selenium	0.0	526	500	105.2	75-125	0.0	0.0	NC	0-20
Silicon									
Silver	0.0	217	200	108.5	75-125	0.0	0.0	NC	0-20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	0.0	486	500	97.2	75-125	0.0	0.0	NC	0-20

Associated samples MP14587: M87994-2, M87994-4, M87994-6



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87994 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes

- (*) Outside of QC limits
- (N) Matrix Spike Rec. outside of QC limits
- (anr) Analyte not requested
- (a) RPD acceptable due to low duplicate and sample concentrations.

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87994
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:	12/14/09	12/14/09

Prep Date:			12/14/09					12/14/09	
Metal	BSP Result	Spikelot MPICP	% Rec	QC Limits	BSD Result	Spikelot MPICP	% Rec	BSD RPD	QC Limit
Aluminum									
Antimony	anr								
Arsenic	512	500	102.4	80-120	513	500	102.6	0.2	20
Barium	1940	2000	97.0	80-120	1920	2000	96.0	1.0	20
Beryllium	anr								
Boron									
Cadmium	507	500	101.4	80-120	504	500	100.8	0.6	20
Calcium									
Chromium	469	500	93.8	80-120	464	500	92.8	1.1	20
Cobalt									
Copper	489	500	97.8	80-120	485	500	97.0	0.8	20
Gold									
Iron	anr								
Lead	995	1000	99.5	80-120	995	1000	99.5	0.0	20
Magnesium									
Manganese	anr								
Molybdenum									
Nickel	489	500	97.8	80-120	489	500	97.8	0.0	20
Palladium									
Platinum									
Potassium									
Selenium	523	500	104.6	80-120	528	500	105.6	1.0	20
Silicon									
Silver	218	200	109.0	80-120	214	200	107.0	1.9	20
Sodium									
Strontium									
Thallium	anr								
Tin									
Titanium									
Tungsten									
Vanadium									
Zinc	490	500	98.0	80-120	486	500	97.2	0.8	20
Aggagiated ga	mmles MD1.	4E07. M070	04 2 1407	004 4 340	70016				

Associated samples MP14587: M87994-2, M87994-4, M87994-6



#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87994
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

#### SERIAL DILUTION RESULTS SUMMARY

# Login Number: M87994 Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/14/09

Prep Date.			12/14/09		
Metal	M87994-2 Original	SDL 1:5	%DIF	QC Limits	
Aluminum					
Antimony	anr				
Arsenic	0.00	0.00	NC	0-10	
Barium	82.2	96.2	17.0 (a)	0-10	
Beryllium	anr				
Boron					
Cadmium	0.00	0.00	NC	0-10	
Calcium					
Chromium	0.00	0.00	NC	0-10	
Cobalt					
Copper	0.00	0.00	NC	0-10	
Gold					
Iron	anr				
Lead	0.00	0.00	NC	0-10	
Magnesium					
Manganese	anr				
Molybdenum					
Nickel	0.00	0.00	NC	0-10	
Palladium					
Platinum					
Potassium					
Selenium	0.00	0.00	NC	0-10	
Silicon					
Silver	0.00	0.00	NC	0-10	
Sodium					
Strontium					
Thallium	anr				
Tin					
Titanium					
Tungsten					
Vanadium					
Zinc	0.00	0.00	NC	0-10	

Associated samples MP14587: M87994-2, M87994-4, M87994-6

#### SERIAL DILUTION RESULTS SUMMARY

Login Number: M87994
Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14587 Methods: SW846 6010B Matrix Type: AQUEOUS Units: ug/l

Prep Date:

Metal

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits (anr) Analyte not requested

(a) Serial Dilution RPD acceptable due to low duplicate and sample concentrations.

#### BLANK RESULTS SUMMARY Part 2 - Method Blanks

Login Number: M87994

Account: LEA - Loureiro Eng. Associates Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14599 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

Prep Date: 12/17/09

Metal	RL	IDL	MDL	MB raw	final
Mergury	0.20	035	048	0 022	<0.20

Associated samples MP14599: M87994-2, M87994-4, M87994-6

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 

(anr) Analyte not requested



#### MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: M87994 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

QC Batch ID: MP14599 Methods: SW846 7470A Matrix Type: AQUEOUS Units: ug/l

12/17/09 12/17/09 Prep Date:

Metal	M87994-2 Original		Spikelot HGRWS1	% Rec	QC Limits	M87994-2 Original		RPD	QC Limits
Mercury	0.0	2.9	3	96.7	75-125	0.0	0.0	NC	0-20

Associated samples MP14599: M87994-2, M87994-4, M87994-6

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\hfill \hfill \h$ 

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

#### SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: M87994 Account: LEA - Loureiro Eng. Associates
Project: UTC: 2009 Quarterly GW-Willow Pond

Methods: SW846 7470A

QC Batch ID: MP14599 Matrix Type: AQUEOUS

Units: ug/l

12/17/09

Prep Date: 12/17/09

Metal	BSP Result	Spikelot HGRWS1	% Rec	QC Limits	BSD Result	Spikelot HGRWS1	% Rec	BSD RPD	QC Limit
Mercury	2.9	3	96.7	80-120	2.8	3	93.3	3.5	20

Associated samples MP14599: M87994-2, M87994-4, M87994-6

Results < IDL are shown as zero for calculation purposes (*) Outside of QC limits  $\bar{\ }$ 

(anr) Analyte not requested



# Appendix C

**Quality Assurance/Quality Control Documentation** 



# QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND EVALUATION

### 1. QUALITY ASSURANCE /QUALITY CONTROL SUMMARY

During the course of the 2009 Post-Remediation Groundwater Monitoring activities, analytical and observational data were obtained for the Willow Brook and Willow Brook Pond Remediation Area (hereinafter referred to as the "Project Area"). These data included analytical data for groundwater samples, field activities documentation, sample tracking documentation, and other documentation associated with sample collection and analysis.

During the course of groundwater monitoring activities, the need to maintain accurate and complete documentation was a paramount concern. Included in this document is a description of the activities undertaken to document, manage, verify, organize, and present the data compiled; a discussion of the types and quantities of Quality Assurance/Quality Control (QA/QC) samples that were collected during field activities; and an evaluation of the analytical data generated as a result of laboratory QA/QC procedures. The evaluation of laboratory QA/QC information includes a Data Quality Assessment (DQA) and a Data Usability Evaluation (DUE) that was performed in accordance with the methodology described in the November 2007 guidance document entitled, *Reasonable Confidence Protocols* and presented in more detail in the May 2009 document entitled *Laboratory Quality Assurance Quality Control, Data Quality Assessment, Data Usability Evaluation Guidance Document* published by the Connecticut Department of Environmental Protection (CT DEP).



# QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND EVALUATION

### 2. DATA MANAGEMENT PROCEDURES

This section has been organized to present those activities performed by personnel to document the record of post-remediation groundwater monitoring activities performed in the field and discuss the QA/QC activities performed in the field. These discussions are followed by a description of the activities undertaken by personnel in the office to ensure the necessary data have been accumulated, that the data have been properly managed, tracked, verified, entered into the database repository, presented appropriately, and at the conclusion of monitoring events, filed for future use.

### 2.1 **Standard Operating Procedures**

Prior to conducting groundwater monitoring activities for the Project Area, Standard Operating Procedures (SOPs) had been developed by Loureiro Engineering Associates, Inc. (LEA) for the most common procedures associated with the sampling and analysis of various media for environmental investigations. Development of these SOPs has taken into account the need for precision, accuracy, completeness, representativeness, and comparability of data.

Although it is understood that there are limits on data accuracy and precision that are inherent in the collection and analysis of samples and in the operation of measuring devices, adherence to standard procedures increases consistency and the level of confidence with which the data collected are evaluated. Data collected under standard procedures can also be used more reliably in comparing results over time on a given project or from other projects or published information.

Data evaluation is also dependent upon the representativeness of the samples or measurements collected and the completeness of information associated with collection of the data. Collection and measurement techniques identified in the SOPs have been designed to take these factors into account, thus increasing the level of confidence that can be placed in the data.

Although adherence to SOPs is imperative for the successful completion of any project, there will be instances where exceptions to the SOPs must be made to obtain reliable data. When exceptions are made, documentation of both the situation requiring deviation and the actual deviation in procedure was recorded in the field documentation.



# QUALITY ASSURANCE AND QUALITY CONTROL PROCEDURES AND EVALUATION

Each SOP was developed by LEA personnel experienced in the performance of the specific activity. At least two senior-level people, one being the Director of Quality, reviewed the SOP to ensure that the identified procedures satisfy the stated objectives and that the prescribed procedures are technically correct, appropriately applied, and in conformance with applicable regulatory criteria and standard practices. These individuals signified their approval by signing and dating the SOP.

SOPs for the following activities have been included as Attachment C-1 of this document.

- Low Flow Sampling;
- Liquid Sample Collection and Field Analysis; and
- Quality Assurance/Quality Control Measures for Field Activities.

# 2.2 Field Quality Assurance Procedures

Field QA/QC procedures begin with the use and maintenance of field equipment and instrumentation and include the proper calibration of the equipment.

### 2.2.1 Use and Maintenance of Field Equipment and Instrumentation

Field equipment and instruments were operated and maintained in a manner that is consistent with the manufacturer's recommended practices. Deviations from standard use of the equipment or required repairs or adaptations made in the field were noted in the Field Record and/or field logbook. Operation and maintenance manuals for equipment were kept in a single location that was known and accessible to personnel that would be likely to use the equipment.

Field personnel either returned equipment in a condition that permitted its optimal use on the following day of field operations, or notified the appropriate personnel so that repairs/replacements could be arranged in an expedient fashion. The use of expendable equipment was recorded and reported to appropriate personnel so replacements could be ordered in a timely manner and an adequate supply was available.

Prior to starting a particular field investigation, the field services manager or designated personnel ensured that adequate supplies and equipment were available for project completion.



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It was the responsibility of field personnel to inform the field services manager or other authorized personnel that supplies were depleted and that re-ordering was necessary.

### 2.2.2 Calibration Procedures and Frequency

Instruments and equipment were calibrated with sufficient frequency and in such a manner that accuracy and reproducibility of results were consistent with the appropriate manufacturer's specifications or project-specific requirements. Calibration was performed at intervals recommended by the manufacturer or more frequently, as conditions dictate. The field instruments that required calibration during the groundwater monitoring activities were the photoionization detector (PID); the pH, dissolved oxygen, and specific conductance sensors of the flow-through cells; and the turbidity meters. Documentation of the calibration that was performed was recorded on field documentation forms, analytical records, or other appropriate daily record of activities.

### 2.2.3 Decontamination

Decontamination procedures are described in applicable SOPs presented in Attachment C-1. These procedures were designed to avoid cross-contamination between samples, the transport of contaminated material between onsite locations, and the transport of contaminated material from onsite or off-site locations. As described in Section 3.2 of this appendix, equipment blank samples were collected to confirm the efficiency of decontamination procedures during groundwater sampling activities.

### 2.3 **Sample Tracking**

Sample tracking activities focus on the timely assignment and tracking of information relevant to field samples collected during the groundwater sampling activities. Samples collected during the groundwater sampling activities were designated using the procedures discussed below.

Field sample tracking included the following tasks:

- Assignment of sample identification numbers and other sample identifiers to new samples to be taken, and entry to a tracking system;
- Production of sample bottle labels from the tracking system;



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- Completion of chain-of-custody forms, and entry of this information to the tracking system;
- Entry of additional tracking dates to the tracking system;
- QA checking of the sample tracking information, and processing of change requests; and,
- Production of tracking reports and summary sheets, with distribution to appropriate project staff.

A computer-based sample-tracking system, based on a dBase[®] database computer program, was used for sample tracking.

### 2.3.1 Sample Location Identification

Samples were designated with location identifiers previously assigned using the procedure described in the SOPs included in Attachment C-1. In general, sample identification information included the sample type (e.g. monitoring well.); and the sample point number.

Monitoring wells have been provided with location identifiers using a systematic method to prevent duplication of location identifiers. Additionally, a two letter prefix identifying the project area (in this case "WT") was also included in the location identifiers. For example, monitoring well number 40 is designated as WT-MW-40.

The system of location identifiers provides a relatively easy means of finding the referenced locations on site drawings.

### 2.3.2 Sample Labeling and Custody

Prior to sample collection, project-specific sample numbers were obtained, and labels were generated with all required information, as noted in the sample collection SOPs. Each sample was labeled using waterproof ink on a computer-generated label, and sealed immediately after collection. At a minimum, each sample label contained the following information:

- Project number;
- Date;
- Sample number; and
- Time of sample collection.



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In order to ensure accurate identification of all sample containers, sample labels and tags were firmly affixed to the sample container. The sampler was responsible for ensuring that the sample container was dry enough for the label to remain securely attached, or used a suitable transparent adhesive tape when the adhesive labels were not applicable or there was any question as to whether the gummed label would be secure.

All sampling information was recorded on the field sampling records. Written chain-of-custody procedures were followed whenever samples were collected, transferred, stored, analyzed, or destroyed. The objective of these procedures was to create an accurate written record that could be used to trace the possession and handling of the samples from the point of collection through analysis. A sample was determined to be in someone's "custody" under any of the following conditions:

- It was in one's actual possession;
- It was in one's view, after being in one's physical possession;
- It was placed and kept in a locked location after being in one's physical possession; and
- It was kept in a secured area that is restricted to authorized personnel only.

Each time sample custody changed hands, the chain-of-custody form indicated that change. All efforts were made to limit the number of people involved in the collection and handling of samples. The field sampler was responsible for the care and custody of the samples collected until they were transferred under the appropriate chain-of-custody procedures. Specific chain-of-custody procedures are described in the LEA SOP for *Quality Assurance/Quality Control Measures for Field Activities* included in Attachment C-1 of this document.

#### 2.3.3 Field Documentation

Daily Field Reports and other project information tracking forms were used to record general field data collection activities or pertinent field observation or occurrences. These forms consist of the loose-leaf field documentation forms completed daily by field crews. Entries were made in waterproof ink and each page was consecutively numbered for each sampling day. Each daily entry included the following information:



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- Name of person recording information;
- Names of all field personnel;
- Project name and number;
- Date:
- Start and end times;
- Weather conditions;
- Equipment used;
- Samples collected;
- Field parameters measured; and,
- Equipment calibration performed.

Other information that was recorded in the field logs included the level of personal protective equipment used, difficulties, accidents, incidents, equipment problems or malfunctions, or deviations from proposed scope of work.

Any corrections made in the field logs were crossed out, not erased, and initialed by the person making the correction. Each page of the logs was signed by the person responsible for recording information on that day. All lines on a page, and all pages, were used or crossed out and initialed.

This information was transmitted from field to office personnel at the end of each working day, or as soon thereafter as possible, for input into LEA's Information Management System (IMS). The Daily Field Reports and forms, in turn, were placed in the central project file.

# 2.3.4 Mapping

The location of each monitoring well was previously surveyed by a State of Connecticut licensed surveyor. All of the information used to locate sampling points within the Project Area was transferred to AutoCAD® drawings that served as the base maps for data presentation in this report.



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### 2.4 Field Sampling Quality Assurance

QA samples were collected in general accordance with the LEA SOP for *QA/QC Measures for Field Activities*, included in Attachment C-1 of this document. The purpose of the QA samples is to confirm the reliability and validity of the field data gathered during the course of the groundwater monitoring activities. Field duplicate samples were used to provide a measurement of the consistency of samples collected from the same monitoring well and an estimate of variance and bias. Trip blank samples and equipment blank samples were used to provide a measurement of cross-contamination sources and decontamination efficiency, respectively, for groundwater sampling. Performance Evaluation (PE) samples were used to assess the overall accuracy and bias of the analytical methods being used and provide an indication of overall laboratory performance. Section 3 provides a discussion of the QA/QC sampling results.

### 2.5 **Sample Shipping**

Following sample collection, the filled sample containers were placed in coolers and packed appropriately to avoid bottle breakage. Either freezer packs or ice packed in re-sealable plastic bags or plastic containers were placed in the coolers to keep the samples at a temperature less than or equal to 4° Celsius during transport. At the end of each sampling day, samples were picked up by the analytical laboratory's courier service or brought back to LEA's Plainville, Connecticut, office and placed into LEA's External Laboratory Refrigerator for pick up the next day by the analytical laboratory's courier service.

### 2.5.1 Samples Submitted for Laboratory Analysis

Groundwater samples collected and submitted to the laboratory for analysis were appropriately labeled and logged on chain-of-custody forms. Copies of completed chain-of-custody records for samples submitted for analysis or archiving were submitted to the Project Manager at the end of each working day or as soon thereafter as possible.

### 2.5.2 Laboratory Analytical Results

The analytical results provided by the laboratory were provided in electronic data deliverable (EDD) format as well as .pdf format to the Project Manager. After documentation of receipt of the results, the EDD was entered into the electronic database by the Database Manager.



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### 2.6 **Database Management**

The electronic analytical database was maintained in the LEA IMS in a dBASE® format. The database management functions are described in the following paragraphs.

#### 2.6.1 Database Administration

Database administration included coordination of data entry and verification and review of data for completeness and correctness. The Database Manager interfaced with the Project Manager and field personnel to ensure that the database met the project objectives.

### 2.6.2 Electronic Data Entry

The EDD files provided by the analytical laboratory were uploaded to the electronic analytical database by the Database Manager. Data received from the laboratory in electronic format were checked for completeness by comparing data received with data analyses requested in the chain-of-custody forms. Analytical data were verified to assure the accuracy of the EDD, as compared to the analytical laboratory reports. Data verification involved having a qualified person other than the Database Manager manually check a printout from the electronic database against the laboratory reports. Any deviations from the laboratory reports were reported to the Database Manager, and the subsequent changes re-checked to verify their accuracy. In addition, the sample identification number, location, constituent, and qualifier codes were also verified.

## 2.6.3 Archiving of Electronic Data

Archiving of the electronic project database was routinely accomplished. Data were backed up on a no-less-than weekly basis. The permanent archive for the analytical and geological/hydrological data is both electronic and hard copy files maintained by LEA.

### 2.6.4 Data Verification

The field personnel performed an initial review of data obtained from field measurements. This review consisted of checking procedures utilized in the field, ensuring that field measurement instruments were properly calibrated, verifying the accuracy of transcriptions, and comparing data obtained in the field to historic measurements. Field records were subsequently reviewed following completion of each day's field activities for completeness and consistency.



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An internal review of analytical data was the responsibility of laboratory personnel. The analyst initiated the data review process by examining and accepting the data. The data reviewer then reviewed the completed data package. The data reviewer provided a technical review for accuracy and precision according to the methods employed and laboratory protocols. The data package was also reviewed for completeness (i.e., all pertinent information is included, all appropriate forms are signed and dated, calculations are correct, and holding times and quality control sample acceptance criteria have been met). A final review of the data was provided by the Project Manager to ensure that the data package met the project specifications.

### 2.7 **Data Presentation**

The objective of data presentation was to illustrate the analytical data for the Project Area in formats that facilitated data interpretation and visualization. These formats include tables, figures, and drawings, as appropriate.

# 2.7.1 Analytical Data Presentation

Use of the electronic database for storage and retrieval of a wide range of both sample collection and analytical information maximized the ease and accuracy of data review and presentation. Tables of analytical and sampling information were produced in multiple formats to assist in the data evaluation process. Examples of analytical data presentations incorporated in this report include: tabular listings of analyses conducted, sorted by location and sample identification number, and summaries of exceedances of tabulated numeric criteria in the CTDEP's Remediation Standard Regulations (RSRs).

### 2.7.2 Facility Drawings

Facility drawings were created using  $AutoCAD^{\circledast}$  software. Base maps were generated using available information provided by Pratt & Whitney.

### 2.8 **File Organization**

Files of original analytical data obtained during the groundwater monitoring events were maintained throughout data evaluation process and ultimately archived in a central file. Incoming data were logged into the project file both on the project analytical database and on



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hardcopy and then were appropriately placed in the file. Analytical results from the laboratories were keyed electronically to the sample identification numbers assigned during sample collection. Original field documentation forms, paper copies of laboratory reports, and other project files information were transferred from the project file to a designated archive location upon the completion of the project. Computerized data were stored in both hard copy and electronic back-up formats.



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### 3. QUALITY ASSURANCE/QUALITY CONTROL SAMPLES

QA/QC samples collected during the 2009 Post-Remediation Groundwater Monitoring Program included: duplicate groundwater samples; equipment blank samples; trip blank samples; and PE samples. The duplicate samples, equipment blanks, and PE samples were analyzed for the same suite of constituents as the field samples, and trip blanks were analyzed for volatile organic compounds (VOCs) only.

## 3.1 Field Duplicate Samples

Field duplicate samples were collected to provide a measure of the reproducibility of field sampling and laboratory analytical methodologies. Duplicate samples were coded in a fashion that did not alert the laboratory to the fact that the samples are replicates. Consistency between analytical results for field duplicate samples indicates consistent field sampling, sample handling, and analytical laboratory procedures. The consistency between field duplicate pairs is often measured by calculating the relative percent difference (RPD) for detects in a field duplicate pair when a compound was reported at greater than two times the sample quantitation limit in both samples. Field duplicate precision were met when the RPD was less than or equal to 30 % for aqueous samples (which is based upon the United States Environmental Protection Agency (EPA) Region I Tier II Validation Guidance). If the RPD exceeded the acceptable limit, the affected compound(s) results were considered to be estimated values (no directional bias) and data usability was evaluated based on the project objectives. The RPD is calculated using the following formula:

$$RPD = \frac{|X_1 - X_2|}{(|X_1 + X_2|)/2} \times 100\%$$

where  $X_1$  and  $X_2$  represent the two reported concentration measurements.

One duplicate groundwater sample was collected during each quarterly monitoring event and was submitted for analysis for VOCs, extractable total petroleum hydrocarbons (ETPH), polychlorinated biphenyls (PCBs), Resource Conservation and Recovery Act (RCRA) 8 metals, copper, nickel and zinc. Field duplicates were submitted at a frequency of one per fifteen samples, which met the QA/QC frequency objective of one field duplicate per twenty samples.



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A summary of field duplicate data for groundwater samples is presented in Table C-1, and a summary of constituents detected in duplicate groundwater samples is presented in Table C-2.

### 3.1.1 Volatile Organic Compounds

There were 31 instances in which compounds were reported at concentrations greater than two times the reporting limit. The RPDs for these sample pairs ranged from 0% to 50%. Five of the compounds exceeded the RPD of 30%, thus indicating that 84% of the RPDs met the acceptance criterion.

Results that did not meet the criterion for field duplicate precision were considered to be estimated concentrations. Usability of estimated data was determined by comparing the higher of the two estimated concentrations in each duplicate pair with the corresponding RSR criteria.

## 3.1.2 Extractable Total Petroleum Hydrocarbons

There were four instances in which compounds were reported at concentrations greater than two times the reporting limit. The RPDs for these sample pairs ranged from 1.4% to 24.7%, thus indicating that 100% of the RPDs met the acceptance criterion.

### 3.1.3 Polychlorinated Biphenyls

PCBs were not detected in any groundwater sample collected. Therefore, a RPD assessment could not be performed.

#### 3.1.4 Metals

There were three instances in which metals were reported at concentrations greater than two times the reporting limit. The RPDs ranged from 3.4% to 13.8%. Therefore, 100% of these results were within the acceptance criteria.

### 3.2 **Equipment Blank Samples**

Equipment blank samples are used to indicate if any cross-contamination of samples between uses of sampling equipment or contamination to samples from disposable equipment may have occurred. Field equipment blank samples are collected by pouring laboratory-provided water



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(analyte-free, de-ionized) through and/or over decontaminated or disposable sampling equipment into appropriate containers. The criteria for evaluating equipment blanks were such that no target compound should be present at or above the sample quantitation limit in any given equipment blank.

One equipment blank sample was collected during each quarterly monitoring event and submitted to the laboratory for analysis for VOCs, ETPH, PCBs, and metals. Acetone was reported at a concentration of 7.6 micrograms per liter (µg/l) in the equipment blank sample analyzed on September 11, 2009. Acetone, however, was not reported above laboratory detection limits in any of the samples that were collected on September 11, 2009. No additional constituents were detected in any of the equipment blank samples collected in 2009. A summary of all equipment blank samples analyzed is provided as Table C-3.

### 3.3 **Trip Blank Samples**

Trip blank samples are used to indicate if any cross-contamination between samples or contamination from other sources of VOCs may have occurred during transport, storage, or laboratory analysis of samples. Trip blank samples were prepared by Accutest Laboratories (Accutest) using ultra-pure, de-ionized water and submitted to the sampling team whenever glassware was delivered. A trip blank sample accompanied all project VOC sample containers through all custody changes in possession, coolers and refrigerators. The trip blank samples were never opened by the sampling team.

A total of nine trip blank samples, one for each day that sampling was conducted, were submitted to Accutest for analysis. No constituents were reported above laboratory detection limits in any of the trip blank samples that were analyzed during the 2009 sampling events. A summary of all trip blank samples is provided as Table C-4.

### 3.4 **Performance Evaluation Samples**

Double blind aqueous PE samples were submitted to Accutest during the September 2009 monitoring event. The PE sample data were used to assess the overall accuracy and bias of the analytical methods being used and provide an indication of overall laboratory performance. Data for the PE samples also provided information about the magnitude and direction of quantitative



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bias for the laboratory methods, including sample preparation (extraction and cleanup) and analysis (chromatography and calibration).

The PE samples for this project were prepared by Environmental Resource Associates (ERA) of Arvada, Colorado. All results for PE samples were compared with vendor-certified acceptance limits. The PE samples results were evaluated for pass and fail. Fails were categorized as bias high, bias low, false negatives and false positives. Performance evaluation sample certified values and results of the performance sample evaluation are included as Attachment C-2. The following is a summary of the performance evaluation samples results by analytical class.

- Volatile Organic Compounds: An evaluation of the results obtained against vendorspecified acceptance standards indicated that each of the VOC constituents
  (tetrachloroethylene, trichloroethylene, vinyl chloride, cis-1,2-dichloroethylene and trans1,2-dichloroethylene) failed because they were reported at concentrations that were above
  the acceptable vendor-certified limits. LEA performed a root cause analysis to determine
  why these PE samples did not meet the acceptance criteria. Both Accutest and ERA
  checked their data and confirmed the results reported to be valid. LEA decided to include
  a PE sample that was prepared for VOCs as part of the December 2009 quarterly
  monitoring event to re-test Accutest's accuracy. The VOC concentrations reported by
  Accutest in the sample that was analyzed as part of the December 2009 sampling event
  were within the acceptance limits.
- **Polychlorinated Biphenyls:** PCBs were reported by the laboratory within the vendor-certified limits.
- Total Petroleum Hydrocarbons: ETPH were reported by the laboratory at a concentration that failed because the value was slightly below the lower vendor-certified limit. A second performance sample was not prepared for ETPH after LEA's root cause analysis concluded that the initial failed ETPH value could be attributed to the variability within the Connecticut ETPH method rather than a reflection of Accutest's accuracy.
- **Metals:** All metals were reported by the laboratory within the vendor-certified acceptable limits



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### 4. ASSESSMENT OF LABORATORY QA/QC INFORMATION

All data were analyzed using the Connecticut Reasonable Confidence Protocols (RCPs), which are analytical methods based on the respective EPA methods. The RCPs provide specific requirements for QA/QC that the laboratory must follow during analysis of environmental samples. In addition, the RCP methods require the laboratory to report the QA/QC analytical data associated with the analysis of each sample in the laboratory report and further require that the laboratory provide a narrative of any non-conformances for QA/QC data the were outside the acceptable limits for such data, as described in the specific RCP method.

QA/QC information provided by laboratories was evaluated with respect to quality by conducting a DQA and DUE in accordance with the methodology described in the November 2007 guidance document entitled *Reasonable Confidence Protocols* and in more detail in the May 2009 document entitled *Laboratory Quality Assurance Quality Control, Data Quality Assessment, Data Usability Evaluation Guidance Document*. The DQA process is intended to assess the quality of the analytical data generated by the laboratories. The DUE is performed to determine, once the quality of the analytical is known, whether the quality of that data will affect its usability for the intended purpose.

### 4.1 Data Quality Assessment and Usability

The DQA was performed to assess the quality of the analytical data in each laboratory analytical report package. The DQA resulted in identifying data for which the quality could affect its potential use in decision-making. The DUE, which took into account the objectives for the data collection effort, and the intended use of the data, was performed using the information developed during the DQA. The RCP Data Quality Assessment Summary Reports that were generated during that assessment process are included as Attachment C-3.

Each analytical data package was reviewed in accordance with the DQA review process. Several deficiencies were noted. These included:

- Reporting of elevated detection limits for VOCs in one groundwater sample;
- Results for Laboratory Control Sample (LCS) for VOCs outside the accepted range of variability;



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- Recoveries for Matrix Spike/Matrix Spike Duplicate (MS/MSD) for VOCs outside the accepted range of variability; and
- Recoveries for initial calibration curve and continuing calibration curve outside the accepted range of variability for specific VOC constituents.

After the laboratory analytical data were evaluated during the DQA, a DUE was performed. The DUE took into account the following:

- the site-specific conceptual site model (CSM);
- knowledge of the contaminant types, concentrations, and distribution;
- objectives for the data collection effort and the intended use of the data (i.e. the data quality objectives (DQOs)); and
- results from field QA/QC sampling.

In general, the QA/QC deficiencies identified related to constituents that are not identified as constituents of concern for the Project Area. Taking into consideration multiple lines of evidence, results from the DUE indicated that the data generated during the 2009 quarterly groundwater sampling events were usable for the intended purpose. Deficiencies that were deemed to have the potential to affect the interpretation of the data, and which, therefore required more detailed evaluation, included the following issues.

A 10 times dilution was applied to the groundwater sample collected from monitoring well WT-MW-50 during the September 2009 sampling event, thus causing the reporting limits to exceed one or more applicable RSR criteria for VOCs. However, a duplicate groundwater sample that was collected from this monitoring well was not diluted. Therefore, the data reported from the duplicate sample was used to evaluate the groundwater concentrations with respect to the RSRs.

A low percent recovery of 67% was reported for chloroethane in the LCS run on December 8, 2009, indicating a low bias. Chloroethane was reported above detection limits in one sample (collected from monitoring well WT-MW-50) that was associated with the LCS, at a concentration of 4.3  $\mu$ g/l. The chloroethane concentration reported in the duplicate sample collected from this monitoring well, which was not associated with the low LCS recovery, was reported at a concentration of 5.8  $\mu$ g/l. The duplicate sample that contained the higher



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concentration of chloroethane was evaluated for decision making purposes as a conservative measure.

The sample collected from monitoring well WT-MW-50 was also selected by the laboratory for MS/MSD analysis. Although percent recoveries were reported below the acceptable QA/QC limits for multiple VOC constituents, only two of these VOCs (chloroethane and tetrahydrofuran) were identified in the unspiked sample at concentrations above the reporting limit. Choroethane was reported with low percent recoveries of 69% and 67% in the MS and MSD, respectively. Tetrahydrofuran, which was identified in the sample at a concentration of 18.4 µg/l, was also reported with a low percent recovery of 66% in the MS and MSD. Based on the facts that the MS/MSD percent recoveries were just below the acceptable lower QA/QC limit of 70%, these constituents are not primary constituents of concern, and the concentrations of chlorethane and tetrahydrofuran are well below the applicable RSR criteria, this data non-conformance was not identified as significant and did not affect decision making.

The rationale discussed in the foregoing statements, coupled with the number and type of QA/QC issues identified during the DQA, provide support for a conclusion that analytical results for the samples collected during the four 2009 monitoring events were considered usable for decision-making purposes.



# **TABLES**



# Table C-1 SUMMARY OF DUPLICATE SAMPLING AND ANALYTICAL INFORMATION Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report



		Gro	oundwater	Monito	oring Rep	ort			L	.oureiro Engi	ineering As	ssociates, Inc.
	Samj	ple Information					Analysis Information					
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses
WT-MW-50	1117655	03/11/2009	16.00 - 26.00	GWS		X			X	X	X	
WT-MW-50	1117661	03/11/2009	16.00 - 26.00	GWS		X			X	X	X	
WT-MW-50	1123438	06/05/2009	16.00 - 26.00	GWS		X			Х	X	X	
WT-MW-50	1123439	06/05/2009	16.00 - 26.00	GWS		X			Х	X	X	
WT-MW-50	1130895	09/11/2009	16.00 - 26.00	GWS		X			Х	X	X	
WT-MW-50	1130896	09/11/2009	16.00 - 26.00	GWS		X			х	X	X	
WT-MW-50	1136013	12/08/2009	16.00 - 26.00	GWS		X			Х	X	X	
WT-MW-50	1136028	12/08/2009	16.00 - 26.00	GWS		X			х	X	X	

Legend: x - mass, t - TCLP, s - SPLP, e - EPTOX, z - ZHE, d - Thermal Desorption, r - Charcoal Tube, a - SEM/AVS, m - Methanol, nr - not received; Capitalized - at least one analyte in class detected Printed on 01/07/2010

# Table C-2 SUMMARY OF CONSTITUENTS DETECTED IN DUPLICATE SAMPLES Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report

Loureiro Engineering Associates. Inc

	Groundwat	ter Monito	ring Report		Loureiro Engineering Associates, Inc.			
	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50
	Sample ID	1117655	1117655	1117661	1117661	1123438	1123438	1123439
	Sample Date	03/11/2009	03/11/2009	03/11/2009	03/11/2009	06/05/2009	06/05/2009	06/05/2009
	Sample Time	10:05	10:05	10:05	10:05	10:25	10:25	10:25
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM
	Lab. Number	M81204-1	M81204-2	M81204-7	M81204-8	M83394-16	M83394-17	M83394-18
Constituent	Units							
Date Metals Analyzed	-		03/13/2009		03/13/2009		06/11/2009	
Date Organics Analyzed	-	03/18/2009		03/18/2009		06/12/2009		06/12/2009
Date Physical Analyzed	-	03/17/2009		03/17/2009		06/18/2009		06/18/2009
Arsenic (unfiltered)	mg/L		0.0095		0.0076		0.0114	
Barium (unfiltered)	mg/L		0.289		0.291		0.304	
Nickel (unfiltered)	mg/L		0.0481		0.0485		0.0484	
Zinc (unfiltered)	mg/L		0.0270		0.0250			
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.198		0.175		0.290		0.286
Benzene	ug/L					0.56		0.50
1,1,1-Trichloroethane	ug/L	2.4		2.5		4.3		4.4
1,1-Dichloroethane	ug/L	3.6		3.7		5.0		5.4
1,2-Dichloroethane	ug/L	2.0						
Chloroethane	ug/L							
1,1-Dichloroethylene	ug/L	35.1		36.3		49.0		51.8
trans-1,2-Dichloroethylene	ug/L	1.0		1.1				
cis-1,2-Dichloroethylene	ug/L	39.7		40.0		59.7		63.2
Vinyl Chloride	ug/L	14.7		15.3		18.4		19.1
Tetrachloroethylene	ug/L	33.2		32.6		37.3		40.9
Trichloroethylene	ug/L	305		306		296		322
Tetrahydrofuran	ug/L	16.5		16.9		24.1		24.3
Chloroform	ug/L					1.4		1.4
Toluene	ug/L	2.5		2.4				

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# Table C-2 SUMMARY OF CONSTITUENTS DETECTED IN DUPLICATE SAMPLES Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report

Loureiro Engineering Associates Ind

	Groundwat	ter Monitoi	ring Report		Loureiro Engineering Associates, Inc.				
	Location ID	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	WT-MW-50	
	Sample ID	1123439	1130895	1130895	1130896	1130896	1136013	1136013	
	Sample Date	06/05/2009	09/11/2009	09/11/2009	09/11/2009	09/11/2009	12/08/2009	12/08/2009	
	Sample Time	10:25	10:29	10:29	10:29	10:29	12:55	12:55	
	Sample Depth	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	16.00' - 26.0	
	Laboratory	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	ACTM	
	Lab. Number	M83394-19	M85761-16	M85761-7	M85761-17	M85761-18	M87915-1	M87915-2	
Constituent	Units								
Date Metals Analyzed	-	06/11/2009	09/16/2009			09/16/2009		12/14/2009	
Date Organics Analyzed	-			09/18/2009	09/19/2009		12/15/2009		
Date Physical Analyzed	-			09/23/2009	09/23/2009		12/19/2009		
Arsenic (unfiltered)	mg/L	0.0105	0.0101			0.0116		0.0066	
Barium (unfiltered)	mg/L	0.3	0.309			0.343		0.351	
Nickel (unfiltered)	mg/L	0.0468	0.0540			0.0548		0.0894	
Zinc (unfiltered)	mg/L								
Total Petroleum Hydrocarbons (CT ETPH)	mg/L			0.202	0.219		0.268		
Benzene	ug/L			0.54			0.56		
1,1,1-Trichloroethane	ug/L			7.2	12.0		3.2		
1,1-Dichloroethane	ug/L			7.3			3.5		
1,2-Dichloroethane	ug/L			2.1			1.2		
Chloroethane	ug/L						4.3		
1,1-Dichloroethylene	ug/L			32.2	35.5		10		
trans-1,2-Dichloroethylene	ug/L			1.9					
cis-1,2-Dichloroethylene	ug/L			38.4	48.7		10.7		
Vinyl Chloride	ug/L			19.8	17.2		3.1		
Tetrachloroethylene	ug/L			22.3	19.6		7.6		
Trichloroethylene	ug/L			162	194		63.3		
Tetrahydrofuran	ug/L			58.9			18.4		
Chloroform	ug/L								
Toluene	ug/L								

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# **Table C-2** SUMMARY OF CONSTITUENTS DETECTED IN DUPLICATE SAMPLES Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report



	Groundwat	Loureiro Engineering Associates, Inc.				
	Location ID	WT-MW-50	WT-MW-50			
	Sample ID	1136028	1136028			
	Sample Date	12/08/2009	12/08/2009			
	Sample Time	12:55	12:55			
	Sample Depth	16.00' - 26.0	16.00' - 26.0			
	Laboratory	ACTM	ACTM			
	Lab. Number	M87915-3	M87915-4			
Constituent	Units					
Date Metals Analyzed	-		12/14/2009			
Date Organics Analyzed	-	12/21/2009				
Date Physical Analyzed	-	12/19/2009				
Arsenic (unfiltered)	mg/L		0.0074			
Barium (unfiltered)	mg/L		0.349			
Nickel (unfiltered)	mg/L		0.0864			
Zinc (unfiltered)	mg/L					
Total Petroleum Hydrocarbons (CT ETPH)	mg/L	0.209				
Benzene	ug/L	0.65				
1,1,1-Trichloroethane	ug/L	5.0				
1,1-Dichloroethane	ug/L	5.8				
1,2-Dichloroethane	ug/L	1.4				
Chloroethane	ug/L	5.8				
1,1-Dichloroethylene	ug/L	13.4				
trans-1,2-Dichloroethylene	ug/L					
cis-1,2-Dichloroethylene	ug/L	17.6				
Vinyl Chloride	ug/L	4.3				
Tetrachloroethylene	ug/L	6.4				
Trichloroethylene	ug/L	80.3				
Tetrahydrofuran	ug/L	23.3				
Chloroform	ug/L					
Toluene	ug/L					

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# Table C-3 SUMMARY OF EQUIPMENT BLANK SAMPLING AND ANALYTICAL INFORMATION Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report



	Groundwater Monitoring Report Loureiro Engineering Associates, Inc											
	Samp	ple Information						Analysis I	nformation	-		
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses
EQUIPMENT	1117663	03/10/2009		BKE		X			X	X	X	
EQUIPMENT	1123444	06/05/2009		BKE		X			X	х	х	
EQUIPMENT	1130950	09/11/2009		BKE		X			X	x	х	
EQUIPMENT	1136027	12/08/2009		BKE		X			X	X	х	
									1			

# Table C-4 SUMMARY OF TRIP BLANK SAMPLING AND ANALYTICAL INFORMATION Pratt & Whitney, East Hartford, Connecticut: Willow Brook & Willow Brook Pond 2009 Annual Groundwater Monitoring Report



	Groundwater Monitoring Report								Loureiro Engineering Associates, Inc.					
	Samp		Analysis Information											
Location ID	Sample ID	Sample Date	Sampled Interval (ft)	Sample Class	LEAAnalyt. Lab.	Volatile Organics	Semivolatile Organics	Herbicides	Pesticides/ PCBs	Fuels/Oils	Metals	Miscellaneous Analyses		
TRIP BLANK	1117662	03/10/2009		BKT		X								
TRIP BLANK	1117660	03/11/2009		BKT		X								
TRIP BLANK	1123446	06/04/2009		BKT		X								
TRIP BLANK	1123443	06/05/2009		BKT		X								
TRIP BLANK	1130877	09/09/2009		BKT		X								
TRIP BLANK	1130889	09/10/2009		BKT		X								
TRIP BLANK	1130949	09/11/2009		BKT		X								
TRIP BLANK	1136026	12/08/2009		BKT		X								
TRIP BLANK	1136025	12/09/2009		BKT		X								

Legend: x - mass, t - TCLP, s - SPLP, e - EPTOX, z - ZHE, d - Thermal Desorption, r - Charcoal Tube, a - SEM/AVS, m - Methanol, nr - not received; Capitalized - at least one analyte in class detected Printed on 01/07/2010

# ATTACHMENT C-1

**LEA Standard Operating Procedures** 



# Loureiro Engineering Associates, Inc. Standard Operating Procedure for Liquid Sample Collection and Field Analysis

**SOP ID: 10004** 

Date Initiated: 02/20/90 Revision No. 006: 12/31/01

Approved By: /s/ Joseph T. Trzaski	<i>12/31/01</i>
Joseph T. Trzaski	Date
Senior Scientist	
/s/ Nick D. Skoularikis	12/31/01
Nick D. Skoularikis	Date
<b>Director of Quality</b>	

# REVISION RECORD

Rev#	<u>Date</u>	Additions/Deletions/Modifications
<b>Initial Issue</b>	2/20/90	
001-004	NR	No record.
005	01/15/99	No record.
006	12/31/01	Updated to conform to new SOP format.
		Minor revisions throughout.



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# Loureiro Engineering Associates, Inc. Standard Operating Procedure for Liquid Sample Collection and Field Analysis

### 1. Purpose and Scope

This document describes procedures to be followed for measurement of static water level elevations, detection of immiscible layers, well evacuation, sample withdrawal, and field analyses.

### 2. Definitions

2.1. Immiscible layers: The term is used to denote free-phase liquids that may be present in the aquifer as a result of a release. These liquids may have a density lighter than water (light non-aqueous phase liquids (LNAPL) or floaters) or heavier than water (dense non-aqueous phase liquids (DNAPL) or sinkers).

### 3. Equipment

- 3.1. Equipment required for the collection and field analysis of liquid samples includes:
  - Water-level indicator (accurate to 0.01 foot). The size of the instrument depends on the size of the wells being monitored.
  - Distilled water
  - Hand towels.
  - Portable volatile organic compound (VOC) analyzer (Photovac MicroTIP[®], Foxboro OVA[®] or equivalent).
  - Interface probe, clear polyvinyl chloride (PVC) or fluorocarbon resin bailer (if required).
  - pH and temperature meter (capable of accuracy to 0.1 pH unit).
  - Specific conductivity meter.
  - Bailers (clean or disposable) with disposable nylon or polyethylene rope.



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- Polyethylene plastic sheeting.
- Polyethylene tubing, and appropriate pumping apparatus such as centrifugal pump, Wattera® pump with fluorocarbon resin foot valve, peristaltic pump with appropriate tubing, submersible pump or other appropriate pumping apparatus.
- Clean disposable gloves.
- Field paperwork.
- Sample collection jars.
- Indelible marker.
- Cooler(s) with ice or ice packs.
- Site-specific Health and Safety Plan (as applicable).
- Site-specific work plan, work instructions, drawings (as applicable).
- Personal protective equipment (as may be required by Site Specific Health and Safety Plan).
- Aluminum foil (if field decontamination is expected).
- Appropriate containers for collection of purge water (bucket, carboy, 55-gallon drum etc.).

### 4. Procedures

Immediately upon opening the well, the air in the wellhead should be sampled for VOCs using a portable VOC analyzer, such as a Photovac MicroTIP[®]. The well cap shall be opened slightly and the sampling port of the VOC analyzer shall be inserted into the well. The maximum reading shall be recorded on the appropriate field paperwork. The instrument shall be zeroed with ambient air prior to the measurement, and the initial and final readings shall be recorded for each well.

Measures shall be taken during well sampling to prevent surface soils from coming in contact with the purging equipment and lines. Typically, a polyethylene sheet is placed on the ground providing adequate coverage for the equipment being used.

### 4.1. Detection of Immiscible Layers

4.1.1. If the presence of immiscible layers is suspected or unknown, the sampling event shall include provisions for detection of immiscible phases prior to well evacuation or sample collection. Lighter and/or



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denser immiscible phases may be encountered in a groundwater monitoring well.

- 4.1.2. An interface probe will be used to determine the existence of any immiscible layers, light or dense. Alternatively, a clear fluorocarbon resin or PVC bailer may be used to determine the existence of the phases or oil sheen in the well when no accurate determination of the immiscible layer thickness is required. For Geoprobe® wells smaller than 1" in diameter, an interface probe cannot be introduced into the well. A small diameter disposable bailer can be used to determine the existence of any immiscible layers. Alternatively the initial water purged from a well will be collected and evaluated visually for the presence of immiscible layers.
- 4.1.3. If immiscible layers were encountered, the levels of the immiscible liquids shall be measured to an accuracy of 0.02 feet using an electronic interface probe capable of detecting the interfaces between air, product, and water. The interface levels shall be recorded in the field notebook. Adjustments of the observed head to the theoretical hydraulic head shall be calculated based on the density conversion factor associated with the particular non-aqueous phase liquid.
- 4.1.4. If required, the immiscible layers and groundwater shall then be purged into 55-gallon 17H DOT drum, which shall be labeled and characterized for disposal. The immiscible layer shall be collected prior to any purging activities.

### 4.2. Measurement of Static Water Level

- 4.2.1. The static water elevations in each well shall be measured prior to each sampling event. This is performed initially to characterize the site, and in subsequent sampling rounds to determine whether horizontal or vertical flow gradients have changed. A change in hydrologic conditions may necessitate modification of the groundwater monitoring program.
- 4.2.2. Remove the protective cover and locking cap.
- 4.2.3. Each well shall have a surveyed reference point located at the top of the well casing with the locking cap removed. The reference point shall be easily recognizable, since the personnel conducting the sampling may differ from one sampling event to the next. If no distinguishable reference point is present, the measurements shall be



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taken from the highest point on the well casing. The absence of a reference point and subsequent reference point used for the measurements shall be recorded on the field paperwork.

- 4.2.4. The following parameters shall be measured with an accuracy of 0.01 ft:
  - Depth to standing water.
  - Depth to bottom of well.
- 4.2.5. A water-level indicator will be used for measurement. Due to possible pressure differences between the well atmosphere and the ambient atmosphere, the water level will be allowed to equilibrate for 15 minutes following removal of the well cap. The results shall be recorded in the appropriate location(s) on the appropriate field forms.
- 4.2.6. Total depth measurements will be compared to original depths to determine the degree of siltation that may have occurred. This information shall be noted on the field form. Should significant siltation occur in any well, the well may need to be redeveloped by an approved method. This information will also be used to confirm that the proper well is being sampled (in case of cluster wells).
- 4.2.7. The portion of the tape immersed in the well shall be decontaminated during retrieval using a distilled water rinse followed by drying with a clean wipe, prior to use in another well. This decontamination procedure shall be amended, as needed, to accommodate the specific type of contamination anticipated.

## 4.3. Field Analysis

- 4.3.1. Parameters that are physically or chemically unstable shall be measured immediately after collection using a field test meter or other equipment. Parameters such as pH, temperature, specific conductivity, and turbidity will be measured in the field, at the temperature of the well sample. The measurement of additional parameters may be required dependent upon sampling methods or other site-specific conditions.
- 4.3.2. A combination of pH/temperature/specific conductivity meters shall be used. The meter shall be calibrated prior to use and at the end of the day using calibration solutions, in accordance with the instructions provided in the instrument's operating manual. Whenever a



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questionable reading ("spike") is observed the calibration shall be checked. The calibration shall be checked prior to sampling each well or well cluster. Calibration information to be recorded in the field paperwork shall include the temperature, pH, and conductivity readings in each calibration solution before and after each calibration.

The pH/temperature/conductivity meters shall be placed into a sample and allowed to stabilize for a minimum of twenty seconds. The accuracy of measurement shall be 0.1 standard units for pH, and 0.1E Celsius for temperature. For conductivity, the accuracy shall be as stipulated by the range of the instrument. The sample shall be discarded in an appropriate manner upon completion of the analysis.

- 4.3.3. The pH/temperature/specific conductivity meters shall be decontaminated using a distilled/deionized water rinse between each sample. To the extent possible, the same probe and meter shall be used for all measurements at a given site for the duration of monitoring at the site.
- 4.3.4. Turbidity of the sample will be measured using a DRT turbidimeter, Model 15C or equivalent, that has been calibrated in accordance with the instructions provided in the instrument's manual. The accuracy of the measurement shall be to 1 NTU (nephelometric turbidity unit).

#### 4.4. Well Evacuation

4.4.1. Calculate standing water in the well based on the following schedule and record on the appropriate field form:

Well Diameter	Conversion Factor
(inches)	(gal/feet)
1/2	0.01
1	0.041
1 1/4	0.064
1 ½	0.091
2	0.163
4	0.654
6	1.47

4.4.2. Generally, a centrifugal, submersible, air-lift, bladder, inertial, or peristaltic pump equipped with a fluorocarbon resin or PVC foot valve on the end of dedicated tubing, as appropriate, may be used to evacuate the monitoring wells. Alternatively, evacuation of the wells may be accomplished using a bailer.



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- 4.4.3. A new sheet of polyethylene plastic shall be placed on the ground adjacent to the well. Sampling and purging equipment, such as pump, tubing, bailers and bailer twine, containers, etc., shall be placed on the polyethylene sheet, never on the ground.
- 4.4.4. Don disposable gloves, prepare pump and tubing for insertion into the well, ensuring that any tubing or pump apparatus is of sufficient length to reach the appropriate depth for pumping. Pumping shall occur within the well screened interval as indicated on the well construction diagram. If the well construction information is not available, the bottom of the tubing or pump shall be placed 1' 2' above the bottom of the well
- 4.4.5. Lower the pump and/or tubing gently into the water column to the appropriate depth and begin pumping.
- 4.4.6. Measure pH, temperature, specific conductivity, turbidity and other specific parameters in the well from the first water extracted during the purging process.
- 4.4.7. Remove a volume of water equal to 3 to 5 times the standing water from the well measured into an appropriate container. Purging of the well shall occur at a slow rate to minimize agitation of the water recharging the well.
- 4.4.8. If it is not possible to remove three volumes as described above, due to slow recovery of the well, the well shall be emptied and allowed to recover. In slow-yielding wells, whenever full recovery exceeds two hours, the sample shall be extracted as soon as a sufficient volume is available for a sample for each parameter.
- 4.4.9. Measure pH, temperature, specific conductivity, turbidity and other specific parameters **prior** to sampling.
- 4.4.10. Well evacuation is deemed to be complete when the following criteria have been met:
  - pH measurements vary no more than  $\pm 0.5$  standard units.
  - Specific conductivity measurements vary no more than  $\pm$  10%.
  - Temperature measurements vary no more than  $\pm$  1EC.
  - Turbidity measurements (if used) are below 5 NTU, if practicable.



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Alternatively well purging shall be deemed complete if a maximum of five well volumes have been removed from the well and/or other site-specific or method-specific parameters have stabilized.

- 4.4.11. Measure pH, temperature, specific conductivity and turbidity (and other specific parameters) again **after** sampling to determine the effectiveness of purging and sample stability.
- 4.4.12. Do **not** re-use purging equipment (bailers, rope, tubing, sampling vials, etc.). Any non-disposable bailers shall be returned to the office for decontamination. Pumps shall be decontaminated between monitoring wells, in accordance with procedures noted in Section 4.7.
- 4.4.13. Bailer twine and other consumables, such as filter apparatus, shall be disposed of appropriately.
- 4.4.14. Record sampler's name, sampling time, volume of water purged, parameters measured, weather conditions, sample number, analyses required and all other pertinent information on appropriate field forms, and complete the chain of custody form. The field paperwork shall also provide an indication of other field conditions that could potentially impact water levels (such as a pond being drained, or presence of a beaver dam in nearby surface water).
- 4.4.15. As dictated by project-specific requirements and/or groundwater quality considerations, any water purged from the monitoring wells shall be stored in properly labeled containers for disposal.
- 4.4.16. Storage shall be in properly labeled containers approved for storage of hazardous materials, and in an appropriate designated location at the site.

#### 4.5. Sample Withdrawal

4.5.1. In order to ensure that the groundwater sample is representative of the formation, it is important to minimize physical alteration (i.e. agitation during purging and/or sample collection) or chemical contamination of the sample during the withdrawal process. The sample set shall include enough dedicated bailers and sample jars to obtain samples from each well, and additional quality assurance/quality control (QA/QC) samples such as duplicates, trip blanks and equipment blanks. In addition, it is recommended to increase the supply of



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sampling equipment and sample jars by about 10% to account for missing or broken glassware.

- 4.5.2. Use either an appropriate pump or bailer to purge each well (the same pump used for purging may be used for sample withdrawal, with the exception that samples intended for VOC analysis must be collected using either a bailer or a bladder pump.). Do not reuse a bailer in the field; used non-disposable bailers shall be returned to the office for decontamination.
- 4.5.3. To minimize agitation of the water column, samples shall be collected from the pump tubing in the following order into pre-labeled sample containers:
  - Extractable organics (semi-volatile).
  - Total petroleum hydrocarbons (TPH).
  - Poly chlorinated biphenyls (PCBs).
  - Metals.
  - Phenols.
  - Cyanide.
  - Chloride and sulfate.
  - Nitrate and ammonia.
  - Turbidity.
  - Radionuclides.

Samples to be analyzed for the following constituents shall be collected using a bailer, after any pump and tubing have been removed from the well. Removal of any down hole equipment shall be done carefully and in a manner that minimizes disturbance of the water column.

- Volatile organic compounds (VOCs).
- Purgeable organic carbon (POCs).
- Purgeable organic halogens (POX).
- Total organic halogens (TOX).
- Total organic carbon (TOC).



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- 4.5.4. Samples shall be obtained from the monitoring wells as soon as possible after purging. This may require waiting an extended period for low-yielding wells.
- 4.5.5. Samples collected for VOC analysis shall be free of any air bubbles and inverted upon filling. Bacterial samples shall be collected using dedicated gloves; taking care not to allow anything to touch the inside of the sampling container.
- 4.5.6. Samples collected for dissolved metals analysis, which are to be filtered in the field, shall be passed through a 0.45 micron (maximum) filter (either in-line or under negative pressure) prior to placement in the sample bottle.
- 4.5.7. In situations where replicate samples shall be required, care shall be taken to ensure that each sample collected is independent.
- 4.5.8. In some situations, inorganic parameters may be sampled directly from a pump after completion of well evacuation procedures.

## 4.6. Post Sampling Procedures

- 4.6.1. As required, upon completion of all sampling procedures for a particular site, secure the lid of the cooler using packaging tape with the chain of custody inside.
- 4.6.2. If the laboratory is local, transport the samples directly to the laboratory and present them to the sample manager. The representative of LEA should witness the verification of the chain of custody and obtain a carbon copy for filing in the project notebook.
- 4.6.3. If the laboratory is distant, arrange for transport with a reputable carrier service. Typically, the laboratory specifies the carrier to be used and provides the shipping papers. The cooler and samples shall be secured for transport, and all mailing documentation secured onto the top of the cooler. Unless otherwise specified, delivery shall be overnight. Friday shipments should be mailed for Saturday delivery, once confirmed that the laboratory can accept them on Saturday. The laboratory shall provide confirmation of acceptance noting the temperature of the temperature blank and any deviations from the chain of custody.



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#### 4.7. Field Documentation

- 4.7.1. Field documentation shall include at a minimum: a chain-of-custody form, Field Data Record Groundwater Form, Sample Collection Form, Daily Field Report, Field Quality Review Checklist. Sample labels shall be used for proper sample identification.
  - 4.7.1.1. The labels shall be sufficiently durable to withstand immersion for 48 hours without detaching and to withstand normal handling. The information provided shall be legible at all times.
  - 4.7.1.2. The following information shall be provided on the sample label using an indelible-ink pen:
    - Sample identification number.
    - LEA Commission Number
    - Date and time of collection.
    - Place of collection.
    - Parameter(s) requested (if space permits).
  - 4.7.1.3. A field logbook and/or appropriate field forms will be used to log all pertinent information with an indelible-ink pen. The following information shall be provided:
    - Project and site identification.
    - LEA commission number.
    - Identification of well.
    - Static water level measurement technique.
    - Presence of immiscible layers and detection method.
    - Time well purged.
    - Collection method for immiscible layers and sample identification numbers.
    - Well evacuation procedure/equipment.
    - Sample withdrawal procedure/equipment.
    - Date and time of collection



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- Types of sample containers used and sample identification numbers.
- Preservative(s) used.
- Parameters requested for analysis.
- Field analysis method(s).
- Whether or not field filtration was performed and the filter size, if appropriate.
- Field observations on day of sampling event.
- Record of site activities.
- Field personnel.
- Climatic conditions, including air temperature.
- Status of total production.
- Record of non-productive time.
- Name of all visitors to the site related to the project.
- 4.7.1.4. The chain-of-custody record shall include the following information:
  - Company's name and location.
  - Date and time of collection
  - Sample number.
  - Container type, number, size.
  - Preservative used.
  - Signature of collector.
  - Signatures of persons involved in the chain of possession.
  - Analyses to be performed.
  - Type and number of samples.

A separate entry shall be made for each sample, and within each sample each case that a different preservative is used.



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- 4.7.1.5. The Field Data Record Groundwater Form shall be updated during the sampling of each well and include the following information:
  - Identification of well.
  - Well depth, diameter, depth to water.
  - Static water level depth and measurement technique.
  - Purge volume and pumping rate.
  - Time well purged.
  - LEA commission number.
  - Date.

#### 4.8. Equipment Decontamination

All materials and equipment, which enter a well, must be clean and free of any potential contaminants. In general, the equipment and materials entering the well shall be unused and preferably disposable. Any items not considered disposable should be decontaminated prior to commencing field activities. If field decontamination is required, the choice of decontamination procedures shall be based upon knowledge of the site-specific contaminants and as outlined in the site-specific work plan.

For sites at which the contaminants are unknown, but contamination is suspected, the decontamination procedures outlined below shall be followed.

- 4.8.1. Prior to commencing any field activities, the following solutions (as appropriate for the appropriate contaminants) shall be prepared and placed into 500-ml laboratory squirt bottles: 10% methanol in water; 10% nitric acid in water; 100% n-hexane; distilled, de-ionized water.
- 4.8.2. In the field, prepare approximately 2.5 gallons of a solution of Alconox[®] (or other suitable non-phosphate laboratory grade detergent) in tap water in a 5-gallon bucket.
- 4.8.3. Prepare a piece of 5-mil polyethylene sheeting to underlie the decontamination area. The sheeting shall be of sufficient size to contain any accidental discharge of decontamination solutions. The plastic shall be bermed to contain spills.
- 4.8.4. The order for decontaminating equipment is as follows:



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- 1) Detergent scrub.
- 2) DI water rinse.
- 3) Hexane rinse (to be used only if separate-phase petroleum product, other than gasoline, is present).
- 4) DI water rinse.
- 5) 10% nitric acid rinse (to be used only when metals are suspected as potential contaminants).
- 6) DI water rinse.
- 7) Methanol rinse (<10% solution).
- 8) Air dry.
- 4.8.5. Materials considered disposable such as the bailer cord, pump tubing, filters, etc. shall not be decontaminated and shall be disposed of in accordance with all applicable municipal, state, and federal regulations.
- 4.8.6. Wrap each piece of decontaminated equipment in aluminum foil, as appropriate, to maintain cleanliness.
- 4.8.7. At the end of the project day, dispose of all spent decontamination fluids and materials such as the polyethylene sheeting and personal protective equipment in accordance with all applicable municipal, state, and federal regulations.

#### 5. Quality Assurance/Quality Control

Typically samples taken for Quality Assurance/Quality Control for liquid sample collection include duplicate samples, equipment blanks and trip blanks. The necessity for these samples will be outlined in the site-specific work plan. In general, all QA/QC measures taken during liquid sample collection shall be in conformance with LEA's standard operating procedure (SOP) ID 10005. Standard QA/QC measure shall include the recording of pertinent information as follows:

- 5.1. The Field Instrument & Quality Assurance Record, which is a portion of the Daily Field Report, shall include the following information:
  - Instrument make, model, and type.
  - Calibration readings.
  - Calibration/filtration lot numbers.
  - Field personnel and signature.



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- 5.2. The Field Quality Review Checklist, which is a portion of the Daily Field Report, shall assure the completeness of the sampling round and include the following information:
  - Reviewer's name and date.
  - Review of all necessary site activities and field forms.
  - Statement of corrective actions for deficiencies.

#### 6. References

- 6.1. EPA, RCRA Groundwater Monitoring Technical Enforcement Guidance Document, OSWER 9950.1, September 1986.
- 6.2. EPA, *Practical Guide for Groundwater Sampling*, EPA/600/2-85/104, September 1985.
- 6.3. DEP, Site Characterization Guidance Document, Draft, June 12, 2000.

END OF DOCUMENT



# Loureiro Engineering Associates, Inc. Standard Operating Procedure for Low Flow (Low Stress) Liquid Sample Collection and Field Analysis

**SOP ID: 10039** 

Date Initiated: 06/11/01 Revision No. 003: 04/01/05

Approved By: /s/ David C. Brisson	<i>04/01/05</i>
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# REVISION RECORD

Rev#	Date	Additions/Deletions/Modifications
Initial Issue	06/11/01	77 1 1 1
001	04/01/02	Updated to reflect new SOP format.
002	12/02/02	Updated to reflect stabilization procedures.
003	04/01/05	Incorporated modified low-flow sampling procedure to include the
		use of a peristaltic pump.



Date Initiated: 06/11/01 Rev. No. 003: 04/01/05

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# Loureiro Engineering Associates, Inc. Standard Operating Procedure For Low Flow (Low Stress) Liquid Sample Collection and Field Analysis

# 1. Purpose and Scope

This standard operating procedure (SOP) describes the procedures to be followed for measurement of static water level elevations, detection of immiscible layers, well evacuation, sample withdrawal, and field analyses utilizing low flow sampling techniques.

#### 2. Definitions

2.1. Immiscible layers: The term is used to denote free-phase liquids that may be present in the aquifer as a result of a release. These liquids may have a density lighter than water (light non-aqueous phase liquids (LNAPL) or floaters) or heavier than water (dense non-aqueous phase liquids (DNAPL) or sinkers).

#### 3. Equipment

- 3.1. Equipment required for the collection and field analysis of liquid samples shall include:
  - Water-level indicator (accurate to 0.01 foot).
  - Distilled water.
  - Hand towels.
  - Portable volatile organic compound (VOC) analyzer (Photovac MicroTIP[®], Foxboro OVA[®] or equivalent).
  - Interface probe/clear view bailer (to check for light non-aqueous phase liquids only).
  - Flow-through cell capable of monitoring pH, temperature, specific-conductance, oxidation reduction potential (Eh), dissolved oxygen (DO), and turbidity.
  - Polyethylene plastic sheeting.



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- Adjustable rate submersible pump (preferred), adjustable rate centrifugal pump, bladder pump (constructed of stainless steel or Teflon®), or adjustable rate peristaltic pump
- Appropriate tubing for the pump used, for instance polyethylene tubing (1/4 to 3/8 inch outer diameter (O.D.)) for the peristaltic pump
- Clean disposable gloves.
- Alconox[®], or other non-phosphate laboratory grade detergent.
- Three 5-gallon buckets.
- Decontamination brushes.
- Distilled, de-ionized (DI) water.
- Decontamination fluids (less than 10 percent methanol in water, 100 percent n-hexane, and 10 percent nitric acid).

#### 4. Procedure

### 4.1. Health & Safety Requirements

All health and safety requirements described in the site specific Health & Safety Plan and/or Job Hazard analysis shall be observed

# 4.2. Equipment Decontamination

All materials and equipment that enter a well must be clean and free of any potential contaminants. Do not use any contaminated equipment or materials which are not designed to be used for groundwater monitoring, even if this means that the sampling will not be performed as planned.

In general, the choice of decontamination procedures should be based upon knowledge of the site-specific contaminants and outlined in the site-specific work plan.

For sites at which the contaminants are unknown, but contamination is suspected, the decontamination procedures outlined below should be followed.

4.2.1. Prior to commencing any field activities, the following solutions (as appropriate for the appropriate contaminants) should be prepared and placed into 500-ml laboratory squirt bottles: less than 10 percent



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methanol in water; 10 percent nitric acid in water; 100 percent n-hexane; distilled, de-ionized water.

- 4.2.2. In the field, prepare approximately 2.5 gallons of a solution of Alconox® (or other suitable non-phosphate laboratory grade detergent) in tap water in a 5-gallon bucket.
- 4.2.3. Prepare a piece of 5-mil polyethylene sheeting to underlie the decontamination area. The sheeting should be of sufficient size to contain any accidental discharge of decontamination solutions. The plastic should be bermed to contain spills.
- 4.2.4. The order for decontaminating equipment is as follows:
  - 1) Detergent scrub.
  - 2) DI water rinse.
  - 3) Hexane rinse (to be used only if separate-phase petroleum product, other than gasoline, is present).
  - 4) DI water rinse.
  - 5) 10 percent nitric acid rinse (to be used only when metals are suspected as potential contaminants).
  - 6) DI water rinse.
  - 7) Methanol rinse (less than 10 percent solution).
  - 8) Air dry.
- 4.2.5. Materials such as the bailer cord should not be decontaminated and should just be disposed of after each test. Note: Bailers should be used **only** to check for LNAPL before sample collection using low-flow/low stress procedures. A bailer may be used to check for DNAPL only **after** all sample collection equipment has been removed from the well.
- 4.2.6. Wrap each piece of decontaminated equipment in aluminum foil, as appropriate, to maintain cleanliness.
- 4.2.7. At the end of the project day, dispose of all spent decontamination fluids and materials such as the polyethylene sheeting and personal protective equipment in accordance with all applicable municipal, state, and federal regulations.

#### 4.3. Sample Collection

4.3.1. Immediately upon opening the well, the air in the well head will be sampled for VOCs using a portable VOC analyzer, such as a Photovac



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MicroTIP® or equivalent. The instrument shall be zeroed with ambient air prior to the measurement, and the highest reading observed shall be recorded for each well. Measurements should be taken until stabilization of the readings has occurred.

#### 4.4. Detection of Immiscible Layers

- 4.4.1. Should evidence warrant, a sampling event shall include provisions for the detection of immiscible phases prior to well evacuation or sample collection. LNAPLs are relatively insoluble liquid organic compounds with densities less than that of water (1 g/ml), while DNAPLs are organic compounds with densities greater than that of water. Lighter and/or denser immiscible phases may be encountered in a groundwater monitoring well.
- 4.4.2. An interface probe will be used to determine the existence of any immiscible layers, light or dense. Alternatively, a clear fluorocarbon resin or PVC bailer may be used to determine the existence of the phases or oil sheen in the well when no accurate determination of the immiscible layer thickness is required. As noted above, efforts to detect LNAPL only can be performed prior to sample collection. Efforts to detect DNAPL can be performed only AFTER sample collection has occurred.
- 4.4.3. Should elevations of the immiscible layers be required, levels of the fluids shall be measured to an accuracy of 0.01 feet using an electronic interface probe capable of detecting the interfaces between air, product, and water. The interface levels shall be recorded in the field form. Adjustments of the observed head to the theoretical hydraulic head shall be calculated based on the density conversion factor associated with the particular non-aqueous phase liquid.
- 4.4.4. If LNAPL is detected in a well, collection of a groundwater sample from that well is not recommended unless otherwise specified in the site-specific work plan or work instruction. However, if a groundwater sample must be collected from that well, low-flow sampling is the recommended technique, although care must be taken to minimize mobilization of the LNAPL into the zone from which the sample will be collected.

#### 4.5. Measurement of Static Water Level



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- 4.5.1. The static water elevations in each well shall be measured prior to each sampling event. This is performed initially to characterize the site, and in subsequent sampling rounds to determine whether horizontal or vertical flow gradients have changed. A change in hydrologic conditions may necessitate modification of the groundwater monitoring program.
- 4.5.2. Remove the protective cover and locking cap from the well.
- 4.5.3. Each well shall have a surveyed reference point located at the top of the well casing with the locking cap removed. The reference point shall be easily recognizable, since the personnel conducting the sampling may differ from one sampling event to the next.
- 4.5.4. The following parameters shall be measured with an accuracy of 0.01 ft:
  - Depth to standing water.
  - Depth to bottom of well.
- 4.5.5. A water-level indicator with a fiberglass tape will be used for measurement. As a result of possible pressure differences between the well atmosphere and the ambient atmosphere, the water level will be allowed fifteen minutes to equilibrate upon removal of the well cap. If excess pressure is encountered the water level will be allowed greater than fifteen minutes to equilibrate upon removal of the well cap. The results shall be recorded on the appropriate field form(s).
- 4.5.6. Total depth measurements will be compared to original depths to determine the degree of siltation that may have occurred. This information shall be noted on the field forms. Should significant siltation occur in any well, the well shall be redeveloped by an approved method.
- 4.5.7. The portion of the tape immersed in the well shall be decontaminated during retrieval using a distilled water rinse followed by drying with a clean wipe, prior to use in another well. This decontamination procedure shall be amended, as needed, to accommodate the specific type of contamination anticipated.
- 4.5.8. The static water level should be monitored and recorded throughout the purging and sampling of each well.



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#### 4.6. Field Analysis

- 4.6.1. Parameters that are physically or chemically unstable shall be tested utilizing a flow-through cell. Such parameters as pH, temperature, specific conductance, DO, Eh, and turbidity will be measured in the field at the temperature of the well sample.
- 4.6.2. Parameters such as pH, temperature, specific conductance, DO, and Eh shall be measured using a flow-through-cell (YSI model 6820 or equivalent). The meter shall be calibrated prior to use and at the end of the day using supplied solutions in accordance with the instructions provided by the manufacturer. Calibration information will be recorded in the field before and after each calibration.
- 4.5.3 Turbidity can be measured with a separate turbidimeter, although some flow-through cells include a turbidimeter. It is useful to have a separate turbidimeter on hand to check the validity of the turbidity values obtained using the flow-through cell if there is difficulty reaching low turbidity values or if the turbidity readings recorded do not seem to be consistent with visual observation of the water samples. All samples, including turbidity samples and samples to be submitted for analysis, must be collected before the groundwater passes through the flow-through cell to prevent cross-contamination by potentially stagnant fluid within the flow-through cell. This can be accomplished by using a bypass assembly or disconnecting the tubing from the flow-cell inlet prior to sampling.

#### 4.7. Well Evacuation

4.7.1. Calculate standing water in the well based on the following schedule and record on the appropriate field form:

Well Diameter	Conversion Factor
(inches)	(gal/feet)
2	0.163
4	0.654
6	1.47

4.7.2. Generally, a submersible, air-lift, bladder, or peristaltic pump equipped with appropriate tubing of inert materials (such as polyethylene), shall be used to evacuate the monitoring wells.



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4.7.3. A new piece of polyethylene plastic shall be placed on the ground adjacent to the well. Sampling and purging equipment such as the pump, tubing, containers, etc., shall be placed on the polyethylene sheet, never on the ground.

- 4.7.4. The pumps and tubing shall be prepared for insertion into the well while wearing disposable gloves. Make sure that any tubing or pump apparatus is of sufficient length to reach the appropriate depth for pumping.
- 4.7.5. Lower the pump and/or tubing gently into the water column to the midpoint of the saturated portion of the screened interval, unless otherwise specified. A site-specific sampling plan should specify the sampling depth, or provide specific criteria for the selection of intake depth for each well. If possible keep the pump intake two feet above the bottom of the well. Start the pump at the lowest speed setting and slowly increase the speed until discharge occurs. The initial pumping rate shall be approximately 0.1 liters per minute, however, the pumping rate shall not exceed 0.25 liters per minute. Measure the water level to ensure that drawdown in excess of 0.3 feet does not occur in the well. Adjust the pumping rate as necessary until little or no drawdown occurs. If the drawdown exceeds 0.3 feet, reduce pumping rate if possible. If drawdown still does not stabilize at a depth above the pump intake, shut the pump down and allow the well to recharge. It should be noted that stable drawdowns of 0.3 feet are desirable but not mandatory. Stabilization of the drawdown to a depth greater than 0.3 feet is acceptable as long as the depth at which stabilization occurs is above the pump intake. However, it is important that the stabilization depth is clearly recorded and maintained.
- 4.7.6. Monitor and record the water level and pumping rate at a minimum of every five minutes during purging. Calculate the volume of the discharge tubing, bladder pump (if used), and the flow-through cell. Monitor and record indicator field parameters (turbidity, pH, Eh, DO, temperature and specific conductance) in the well from the first water extracted during the purging process and at least every five minutes thereafter. Stabilization is considered to be achieved when three consecutive readings are within the following limits and no increasing or decreasing trend in the data can be observed:



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- Turbidity (10% for values less than 5 and greater than 1 NTU). It should be noted that achievements of turbidity levels less than 5 NTUs are not mandatory but efforts should be made to collect a groundwater samples with the lowest turbidity achievable.
- DO (10%, measured as milligrams per liter).
- Specific Conductance and Temperature (3%).
- pH (+/- 0.1 unit).
- ORP/Eh (+/- 10 millivolts).
- 4.7.7. If after 2.5 hours of purging or the purging of three well volumes, (whichever comes first) the field parameters have not stabilized, purging may be discontinued to allow sample collection. Similarly, if it is not possible to obtain stabilization as described above as a result of slow recovery of the well, the well shall be evacuated and allowed to recover, at which point the samples should be collected immediately. The appropriate sampling forms shall include a notation that sample collection occurred without stabilization. Samples obtained from slow-yielding wells shall be collected as soon as a sufficient volume is available for a sample for each parameter.
- 4.7.8. Do **not** re-use purging equipment. Pumps shall be decontaminated between monitoring wells, in accordance with procedures noted in Section 4.1.
- 4.7.9. Record sampler's name, sampling time, volume of water purged, parameters measured, weather conditions, sample number, analyses required and all other pertinent information in the field notebook and/or appropriate field forms, and complete the chain of custody form.
- 4.7.10. Any water purged from the monitoring wells shall be stored in appropriate containers until the laboratory analyses are available. Then it should be disposed of in accordance with all applicable local, state and federal requirements.
- 4.7.11. Storage shall be in containers approved for storage of hazardous materials, and in an appropriate designated location at the facility.



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#### 4.8. Sample Withdrawal

- 4.8.1. In order to ensure that the groundwater sample is representative of the formation, it is important to minimize physical alteration (i.e. agitation during purging and/or sample collection) or chemical contamination of the sample during the withdrawal process.
- 4.8.2. Use an appropriate pump to purge each well; the same pump used for purging shall be used for sample withdrawal.
- 4.8.3. The samples shall be collected at a location before entering the flow-through cell. To minimize the effects of water column agitation on sample quality, samples shall be collected from the pump tubing in the following order into pre-labeled sample containers:
  - VOCs.
  - Total petroleum hydrocarbons.
  - Extractable organics (semivolatiles).
  - PCBs.
  - Metals.
  - Phenols.
  - Cyanide.
  - Chloride and sulfate.
  - Nitrate and ammonia.
  - Turbidity.
  - Radionuclides.
  - Purgeable organic carbon (POCs).
  - Purgeable organic halogens (POX).
  - Total organic halogens (TOX).
  - Total organic carbon (TOC).
- 4.8.4. Samples shall be obtained from the monitoring wells as soon as possible after purging. This may require waiting an extended period for low-yielding wells.



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4.8.5. Samples collected for VOC analysis shall be free of any air bubbles and inverted upon filling. Bacterial samples shall be collected using dedicated gloves; taking care not to allow anything to touch the inside of the sampling container.

4.8.6. Samples collected for metals analysis, which are to be filtered in the field, shall be passed through an appropriately sized filter prior to placement in the sample bottle. Pre-rinse the filter with approximately 25 to 50 milliliters of groundwater prior to collecting the filtered metals sample. Filter sizes will generally be either 0.45 microns for dissolved metals and 10 microns for metals that could be present as colloids or adsorbed onto colloids that could be mobile in the aquifer. The appropriate filter size for the individual project must be provided in site-specific work instructions.

#### 4.9. "What If" Scenarios

4.9.1. Certain field conditions may be encountered that influence the choice of equipment to be used or altogether limit the feasibility of low-flow sampling techniques. The following is a brief description of select scenarios to provide field personnel with a guideline if similar circumstances are encountered

## 4.9.2. Turbidity

- 4.9.2.1. If turbidity measurements do not stabilize as described above after 2.5 hours of purging or the evacuation of three well volumes, whichever comes first, sample collection can be initiated. Record observations of the color, clarity, and other observable characteristics of the groundwater (such as the presence or absence of particles) in the field paperwork
- 4.9.2.2. If samples are being collected for analysis for total (unfiltered) metals and the turbidity has not stabilized below 10 NTU, a sample for additional analysis for metals should also be collected after being filtered in the field through an in-line 10-micron filter, if specified in the work instructions.

#### 4.9.3. Peristaltic Pump



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4.9.3.1. Difficulty may be encountered while advancing the flexible polyethylene peristaltic pump tubing to the desired depth within a deep well or older well. Excessive friction may result from the tubing contacting the sidewall of the well casing or accumulations of material on the well casing (i.e. mineral and bacterial deposits). In these scenarios, the tubing may coil within the well during advancement and prevent the desired depth from being attained. Efforts to weight the tubing should be attempted before using alternate pumping techniques.

- 4.9.3.2. If such well conditions are expected, a bladder pump or similarly submersible pump should be used instead of a peristaltic pump. A bladder pump provides sufficient mass on the tubing to allow for advancement in deep or older wells.
- 4.9.3.3. A peristaltic pump cannot be used to sample wells in which the depth to water is greater than approximately 25 feet.

#### 4.9.4. Sampling Depth

4.9.4.1. If conditions exist that prevent the appropriate pump or tubing from being advanced to the midpoint of the saturated portion of the screened interval, low-flow sampling techniques shall not be used. Instead, sampling shall be conducted using conventional purging and sampling techniques, as described in LEA SOP 10004 entitled *Liquid Sample Collection and Field Analysis*. Justification for not using low-flow sampling techniques must be provided in the field paperwork.

#### 4.10. Field Documentation

- 4.10.1. Field documentation shall include at a minimum: a chain-of-custody form, Field Data Record Groundwater Form, Sample Collection Form, Daily Field Report. Sample labels and sample seals shall be used for proper sample identification.
  - 4.10.1.1. The labels shall be sufficiently durable to withstand immersion for 48 hours without detaching and to withstand normal handling. The information provided shall be legible at all times.



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- 4.10.1.2. The following information shall be provided on the sample label using an indelible pen:
  - Sample identification number.
  - Date and time of collection.
  - Place of collection.
  - Parameter(s) requested (if space permits).
- 4.10.1.3. Appropriate field forms will be used to log all pertinent information with an indelible pen. The following information shall be provided:
  - Project and site identification.
  - LEA commission number.
  - Identification of well.
  - Static water level measurement technique.
  - Presence of immiscible layers and detection method.
  - Time well purged.
  - Collection method for immiscible layers and sample identification numbers.
  - Well evacuation procedure/equipment.
  - Sample withdrawal procedure/equipment.
  - Date and time of collection.
  - Types of sample containers used and sample identification numbers.
  - Preservative(s) used.
  - Parameters requested for analysis.
  - Field analysis method(s).
  - Whether or not field filtration was performed and the filter size, if appropriate.
  - Field observations on day of sampling event.
  - Record of site activities.
  - Field personnel.



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- Climatic conditions, including air temperature.
- Status of total production.
- Record of non-productive time.
- 4.10.1.4. The Field Sampling Record shall include at a minimum the following information:
  - Identification of well.
  - Date and time of collection.
  - Name of collector.
  - Sample number.
- 4.10.1.5. The chain-of-custody record shall include the following information:
  - Company's name and location.
  - Date and time of collection.
  - Sample number.
  - Container type, number, size.
  - Preservative used.
  - Signature of collector.
  - Signatures of persons involved in the chain of possession.
  - Analyses to be performed.
  - Type and number of samples.
- 4.10.1.6. The Field Data Record Groundwater Form shall be updated during the sampling of each well and include the following information:
  - Identification of well.
  - Well depth, diameter, depth to water.
  - Static water level depth and measurement technique.
  - Purge volume and pumping rate.
  - Time well is purged.



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- Measurements of initial field parameters and all subsequent readings.
- Any specific circumstances, as described above, such as field filtering, lack of stabilization of parameters, water characteristics, etc.
- LEA commission number.
- Date.
- 4.10.1.7. The Daily Field Record shall include the following information:
  - Client's name, location, LEA commission number, date.
  - Instrument make, model, and type.
  - Calibration readings.
  - Calibration/filtration lot numbers.
  - Field personnel and signature.
- 4.10.1.8. The Daily Field Record shall assure the completeness of the sampling round and include the following information:
  - Reviewer's name, date, and LEA commission number.
  - Review of all necessary site activities and field forms.
  - Statement of corrective actions for deficiencies.

#### 5. References

- 5.1. United States Environmental Protection Agency (EPA), Region I. Low Stress (Low Flow) Purging and Sampling Procedure for the Collection of Groundwater Samples from Monitoring Wells, July 30, 1996, Revision 2.
- 5.2. EPA. Groundwater Sampling Guidelines for Superfund and RCRA Project Managers Groundwater Forum Issue Paper, Office of Solid Waste and Emergency Response, (EPA 542-S-02-001), May 2002.
- 5.3. Robert W. Puls and Michael Barcelona, EPA. Low-Flow (Minimal Drawdown) Ground-Water Sampling Procedures, in Groundwater Issue, (EPA/540/S-95/504), April 1996.



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5.4. Connecticut Department of Environmental Protection, Bureau of Water Management, Permitting Enforcement and Remediation Division. Site Characterization Guidance Document, Draft, June 12, 2000.

END OF DOCUMENT



# Loureiro Engineering Associates, Inc. Standard Operating Procedure for Quality Assurance/Quality Control Measures for Field Activities

**SOP ID: 10005** 

Date Initiated: 02/20/90 Revision No. 004: 12/31/01

Approved By: /s/ Jeffrey J. Loureiro	<u>12/19/01</u>				
Jeffrey J. Loureiro	Date				
President					
/s/ Nick D. Skoularikis	12/19/01				
Nick D. Skoularikis	Date				
<b>Director of Quality</b>					

# REVISION RECORD

Rev#	Date	Additions/Deletions/Modifications
Initial Issue 001-003 004	02/20/90 - 12/31/01	No record. Updated to reflect new SOP format. Added section 4.3, Results Evaluation. Minor revisions throughout.



Date Initiated: 02/20/90 Rev. No. 004: 12/31/01

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# Loureiro Engineering Associates, Inc. Standard Operating Procedure for Quality Assurance/Quality Control Measures for Field Activities

#### 1. Statement of Purpose

This document describes procedures to be followed for proper Quality Assurance Quality Control (QA/QC) practices which shall incorporate all activities associated with sampling tool and instrument preparation, field measurements and sampling, proper documentation of field and post-field activities, QC sample preparation, chain-of-custody protocol and laboratory analytical procedures. The use of specific QA/QC measures is project-specific as defined in the project work plan. This standard operating procedure (SOP) was adopted in accordance with the Environmental Protection Agency (EPA) document *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (SW-846).

#### 2. Definitions

- 2.1. Trip Blank: An aliquot of organic-free water or equivalent neutral reference material carried into the field but not exposed.
- 2.2. Equipment Blank: An aliquot of analyte-free deionized water processed through all sample collection equipment.
- 2.3. Replicate Samples: Samples that have been divided into two or more portions in the field.
- 2.4. Collocated Samples: Independent samples collected under identical circumstances in a way that they are equally representative of the parameter of interest.
- 2.5. Performance Evaluation (PE) Sample: A sample that mimics actual samples in all possible aspects, except that its composition is known to the auditor and unknown to the analyst.

#### 3. Equipment

None



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#### 4. Procedure

#### 4.1. General

- 4.1.1. All QA/QC sample preparation procedures shall be properly documented including:
  - Name of person(s) or laboratory involved in sample preparation.
  - Reagents used.
  - Sample number.
  - Analyses required.
  - Concentration calculations.
  - Accuracy of measurements.
  - Number, type, size of containers used.
  - Preservation method.
  - Date and time of sample preparation.
- 4.1.2. All information shall be included in the field logbook and/or appropriate field forms, but not necessarily in the chain-of-custody record except as needed for proper sample identification and analysis. Blind sample numbers are being used in order not to disclose the nature of the sample to the laboratory. No information that would identify the sample as a QA/QC sample shall be included in the chain-of-custody record.
- 4.1.3. At the conclusion of each sampling day, a quality control review shall be conducted using the Field Quality Review Checklist and the Daily Field Report.

#### 4.2. QC Sample Preparation

#### 4.2.1. Trip Blank

- 4.2.1.1. Contaminated trip blanks may indicate contamination of the samples during the field trip or shipment to the lab, cross-contamination between the samples, contaminated sample vials, or improper handling.
- 4.2.1.2. Trip blanks shall be used only with samples that are to be analyzed for volatile organic compounds.



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4.2.1.3. One trip blank shall be included per shipping container (cooler) carrying sample soil and/or groundwater samples that are to be analyzed for volatile organic compounds

4.2.1.4. Trip blanks are prepared using analyte-free deionized organic-free water prior to field activities associated with the sampling event, usually by the laboratory providing the sampling containers. Each trip blank is placed in a 40-ml glass VOA vial and is carried in the same shipping container as the sample(s). Trip blanks should not be opened at any time during transport.

# 4.2.2. Equipment Blank

- 4.2.2.1. The purpose of an equipment/rinsate blank is to determine if decontamination procedures were adequate or if any of the equipment might contribute contaminants to the sample.
- 4.2.2.2. An equipment blank is prepared by running analyte-free deionized water through all sample collection equipment (bailers, pumps, filters, split-spoon) and placing it in the appropriate sample containers for analysis. If equipment has been decontaminated in the field, the equipment blank shall be collected after decontamination procedures have been performed.
- 4.2.2.3. Equipment blanks shall be used when sampling surface water, groundwater, soil, and sediment.
- 4.2.2.4. One equipment blank shall be collected for each sample bottle/preservation technique/analysis procedure per matrix per sampling event, or as otherwise specified in project-specific documents.

#### 4.2.3. Replicate Samples

- 4.2.3.1. Replicate samples provide precision information on handling, shipping, storage, preparation and laboratory analysis.
- 4.2.3.2. Replicate samples are samples that have been divided into two or more portions in the field. An example of a replicate sample is two identical sample bottles filled with water from the same bailer retrieval. To ensure homogeneity, the bailer should be emptied into a clean, decontaminated beaker used exclusively



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for the purpose and containing sufficient volume for both sample containers, and from that into the sample containers.

- 4.2.3.3. Replicate samples cannot be used when sampling for volatile organic compounds.
- 4.2.3.4. One replicate sample shall be obtained for each sample bottle/preservation technique/analysis procedure per sampling event or one out of every 20 samples, unless collocated samples are used (see below), or as otherwise specified in project-specific documents.

#### 4.2.4. Collocated Samples

- 4.2.4.1. Collocated samples provide precision information on sample acquisition, homogeneity, handling, shipping, storage, preparation and laboratory analysis.
- 4.2.4.2. Collocated samples are independent samples collected in such a way so that presumably they are equally representative of the parameter of interest. Examples of collocated samples are groundwater samples collected sequentially, soil core samples collected side-by-side, or air samples collected essentially at the same time from the same manifold.
- 4.2.4.3. Collocated samples are especially useful when sampling for volatile organic compounds, for which replicate samples cannot be used.
- 4.2.4.4. Collocated samples shall be obtained for each sample bottle/preservation technique/analysis procedure per sampling event or one out of every 20 samples, unless replicate samples are used (see above), or as otherwise specified in project-specific documents.

#### 4.2.5. Split Samples

- 4.2.5.1. The purpose of split samples is to provide an assessment of the laboratory analytical procedure.
- 4.2.5.2. Split samples are collocated or replicate samples sent to two (or more) different laboratories.
- 4.2.5.3. Split samples can be used with any sample media. Split samples can be used in conjunction with spiked samples (see



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below). In case contradictory results are obtained from the samples split between different laboratories, the spiked samples can be used to verify the analytical data (provided that the spiked samples were properly prepared and the appropriate documentation is available).

4.2.5.4. When used, one split/spiked sample per sample bottle/preservation technique/analysis procedure per sampling event or every 20 samples shall be included, or as specified in project-specific documents.

# 4.2.6. Spiked Samples

- 4.2.6.1. The purpose of spiked samples is to provide information on the precision of the laboratory analytical procedure. However, besides a wrong preparation, several other sources of error exist such as analyte stability, holding time and interactions with the sample matrix.
- 4.2.6.2. Spiked samples are samples spiked with the contaminants of interest. The compounds used for spiking should be of the same chemical group as the contaminants being investigated, but they do not have to be the exact chemical compounds. Spiking should be carefully designed and performed prior to the field investigations. Field matrix spikes are not generally recommended because of the high level of technical expertise required for proper preparation and documentation.
- 4.2.6.3. Can be used with any sample media, however, liquid matrices are preferred due to uniformity of mixing.
- 4.2.6.4. When used, one split/spiked sample sample per bottle/preservation technique/analysis procedure per sampling event or every 20 samples shall be included, or as otherwise specified in project-specific documents. In order to ensure defensible data, performance evaluation (PE) samples, prepared by an independent vendor, are typically being used. The ordering and handling procedures and record keeping discussed in Loureiro requirements are Engineering Associates, Inc. (LEA's) SOP for Preparation of PE Samples (SOP 10030).



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#### 4.3. Result Evaluation

- 4.3.1. The analytical results on QA/QC samples should be evaluated along with the remaining analytical data as follows:
  - 4.3.1.1. No constituents should be detected in the trip blank or equipment blank.
  - 4.3.1.2. The relative percent differences (RPDs) shall be computed for all constituents detected in both duplicate samples used.

The RPD between two measurements (e.g., M1 and M2) is calculated as follows:

$$RPD = \frac{\mid M1 - M2 \mid}{(M1 + M2)/2} \times 100\%$$

4.3.1.3. Any deviations in the performance evaluation samples shall be brought to the attention of the laboratory. An investigation shall then be performed by the laboratory of the method used, laboratory QA/QC procedures followed, and computations performed. The laboratory shall report the results of their investigation and any corrective actions taken.

#### 5. References

5.1. EPA, Test Methods for Evaluating Solid Waste, Physical/Chemical Methods (SW-846).

END OF DOCUMENT



# **ATTACHMENT C-2**

**Performance Evaluation Sample Results** 



## RESULTS OF PERFORMANCE SAMPLE EVALUATION

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Page

Loureiro Engineering Associates, Inc.

Location Identifier: Perf	09/11/2009 14:0	0 Peri	forman	ce Evalı	ation.	Water	r					
Chemical Name	Reported Concentration	Qualifiers	R.L.	M.D.L.		Dil.		Lab. Number	Reference	Upper Limit	Lower Limi	it Result
1,1,1,2-Tetrachloroethane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,1,1-Trichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
1,1,2,2-Tetrachloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
1,1,2-Trichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
1,1,2-Trichlorotrifluoroethane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,1-Dichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
1,1-Dichloroethylene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
1,1-Dichloropropene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,2,3-Trichlorobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,2,3-Trichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,2,4-Trichlorobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,2,4-Trimethylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,2-Dibromo-3-Chloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,2-Dichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
1,2-Dichloropropane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	M85761-12				
1,3,5-Trimethylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
1,3-Dichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
2-Hexanone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
4-Isopropyltoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
Acetone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
Acrylonitrile	ND<25	U	25	25	ug/L	1	ACTM	M85761-12				
Arochlor 1016	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arochlor 1221	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arochlor 1232	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arochlor 1242	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arochlor 1248	0.96		0.25		ug/L	1	ACTM	M85761-12	1.31	1.79	0.687	Pass
Arochlor 1254	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arochlor 1260	ND<0.25	U	0.25	0.25	ug/L	1		M85761-12				
Arochlor 1262	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arochlor 1268	ND<0.25	U	0.25	0.25	ug/L	1	ACTM	M85761-12				
Arsenic (unfiltered)	0.0064		0.004	0 0.001	mg/L	1	ACTM	M85761-13	0.00700	0.00769	0.00605	Pass
Barium (unfiltered)	0.408		0.2	0.00057	mg/L	1		M85761-13	0.400	0.435	0.364	Pass
Benzene	ND<0.50	U	0.50	0.50	ug/L	1		M85761-12				
Bromobenzene	ND<5.0	U	5.0	5.0	ug/L	1		M85761-12				
Bromodichloromethane	ND<1.0	U	1.0	1.0	ug/L	1		M85761-12				

#### P&W East Hartford, East Hartford, Connecticut

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Bromoform	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				_
Bromomethane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	M85761-12				
Butyl Benzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
Cadmium (unfiltered)	0.101		0.0040	0.00024	mg/L	1	ACTM	M85761-13	0.100	0.106	0.0877	Pass
Carbon Disulfide	ND<5.0	U	5.0	5.0		1	ACTM	M85761-12				
Carbon Tetrachloride	ND<1.0	U	1.0	1.0	_	1	ACTM	M85761-12				
Chlorobenzene	ND<1.0	U	1.0	1.0		1	ACTM	M85761-12				
Chlorodibromomethane	ND<1.0	U	1.0	1.0	_	1	ACTM	M85761-12				
Chloroethane	ND<2.0	U	2.0	2.0		1	ACTM	M85761-12				
Chloroform	ND<1.0	U	1.0	1.0		1	ACTM	M85761-12				
Chloromethane	ND<2.0	U	2.0	2.0		1	ACTM	M85761-12				
Chromium, Total (unfiltered)	0.203		0.01	0.00081	_	1	ACTM	M85761-13	0.200	0.218	0.182	Pass
Copper (unfiltered)	0.0410		0.025	0.0022	mg/L	1	ACTM	M85761-13	0.0400	0.0436	0.0360	Pass
Dichlorodifluoromethane	ND<2.0	U	2.0	2.0	_	1	ACTM	M85761-12				
Ethylbenzene	ND<1.0	U	1.0	1.0		1	ACTM	M85761-12				
Ethylene Dibromide	ND<2.0	U	2.0	2.0	_	1	ACTM	M85761-12				
Hexachlorobutadiene	ND<5.0	U	5.0	5.0		1	ACTM	M85761-12				
Isocumene	ND<5.0	U	5.0	5.0		1	ACTM	M85761-12				
Isopropylbenzene (Cumene)	ND<5.0	U	5.0	5.0	-	1	ACTM	M85761-12				
Lead (unfiltered)	ND<0.0050	U	0.0050	0.0011		1	ACTM	M85761-13				
Mercury (unfiltered)	ND<0.00020	U		(0.000035	mg/L	1	ACTM	M85761-13				
Methyl Ethyl ketone	ND<5.0	U	5.0	5.0	-	1	ACTM	M85761-12				
Methyl Isobutyl ketone	ND<5.0	U	5.0	5.0		1	ACTM	M85761-12				
Methyl tert-Butyl ether	ND<1.0	U	1.0	1.0	-	1	ACTM	M85761-12				
Methylene Chloride	ND<2.0	U	2.0	2.0	-	1	ACTM	M85761-12				
Methylene Dibromide	ND<5.0	U	5.0	5.0	_	1	ACTM	M85761-12				
Naphthalene	ND<5.0	U	5.0	5.0		1	ACTM	M85761-12				
Nickel (unfiltered)	0.605		0.04	0.00024		1	ACTM	M85761-13	0.600	0.657	0.544	Pass
Selenium (unfiltered)	ND<0.01	U	0.01	0.0019	mg/L	1	ACTM	M85761-13				
Silver (unfiltered)	ND<0.0050	U	0.0050				ACTM	M85761-13				
Styrene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M85761-12				
Tetrachloroethylene	39.6		1.0		ug/L	1	ACTM	M85761-12	30.3	36.2	19.3	FAIL
Tetrahydrofuran	ND<10	U	10	10		1	ACTM	M85761-12				
Toluene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
Trichloroethylene	31.4		1.0			1	ACTM	M85761-12	24.5	29.5	17.8	FAIL
Trichlorofluoromethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M85761-12				
Vinyl Chloride	163		1.0			1	ACTM	M85761-12	91.0	140	50.0	FAIL
Xylenes,m- & p-	ND<1.0	U	1.0	1.0	_	1	ACTM	M85761-12				
Zinc (unfiltered)	0.0316		0.02	0.00074	_	1	ACTM	M85761-13	0.0300	0.0331	0.0272	Pass
cis-1,2-Dichloroethylene	131		1.0			1	ACTM	M85761-12	92.8	115	72.8	FAIL

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cis-1,3-Dichloropropene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM M85761-12				
m-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M85761-12				
o-Chlorotoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M85761-12				
o-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M85761-12				
o-Xylene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M85761-12				
p-Chlorotoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M85761-12				
p-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M85761-12				
sec-Butylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M85761-12				
sec-Dichloropropane	ND<5.0	U	5.0	5.0	ug/L		ACTM M85761-12				
tert-Butylbenzene	ND<5.0	U	5.0	5.0	ug/L		ACTM M85761-12				
trans-1,2-Dichloroethylene	31.7		1.0		ug/L	1	ACTM M85761-12	23.6	29.9	17.6	FAIL
trans-1,3-Dichloropropene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM M85761-12				
trans-1,4-Dichlorobutene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M85761-12				

Location Identifier: Performance						
Sample Identifier 1130894	09/11/2009 14:10 Peri	ormance Evaluation	n, Water			
Chemical Name	Reported Concentration Qualifiers	R.L. M.D.L. Units	Dil. Lab.	Lab. Number Reference	Upper Limit Lower Limit	Result
Total Petroleum Hydrocarbons (CT ETPH)	0.287	0.080 mg/I	1 ACTM	M85761-11 1.00	1.21 0.304	FAIL

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Loureiro Engineering Associates, Inc.

Location Identifier: Perfo	mance 36024 12/09/2009 13:	45 Per	forman	ice Evali	uation.	Wate	r					
Chemical Name	Reported Concentration	Qualifiara	R.L.	M.D.L.		Dil.	Lab.	Lab. Number	Reference	Upper Limit	Lower Limit	Result
1,1,1,2-Tetrachloroethane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,1,1-Trichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
1,1,2,2-Tetrachloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
1,1,2-Trichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
1,1,2-Trichlorotrifluoroethane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,1-Dichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
1,1-Dichloroethylene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
1,1-Dichloropropene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,2,3-Trichlorobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,2,3-Trichloropropane	ND<5.0	U	5.0	5.0	ug/L	1		M87994-8				
1,2,4-Trichlorobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,2,4-Trimethylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,2-Dibromo-3-Chloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,2-Dichloroethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
1,2-Dichloropropane	ND<2.0	U	2.0	2.0	ug/L	1	ACTM	M87994-8				
1,3,5-Trimethylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
1,3-Dichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
2-Hexanone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
4-Isopropyltoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
Acetone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
Acrylonitrile	ND<25	U	25	25	ug/L	1	ACTM	M87994-8				
Benzene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM	M87994-8				
Bromobenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM	M87994-8				
Bromodichloromethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
Bromoform	ND<1.0	U	1.0	1.0	ug/L	1	ACTM	M87994-8				
Bromomethane	ND<2.0	U	2.0	2.0	ug/L	1		M87994-8				
Butyl Benzene	ND<5.0	Ü	5.0	5.0	ug/L	1		M87994-8				
Carbon Disulfide	ND<5.0	Ü	5.0	5.0	ug/L	1		M87994-8				
Carbon Tetrachloride	ND<1.0	Ü	1.0	1.0	ug/L	1		M87994-8				
Chlorobenzene	ND<1.0	Ü	1.0	1.0	ug/L	1		M87994-8				
Chlorodibromomethane	ND<1.0	Ü	1.0	1.0	ug/L	1		M87994-8				
Chloroethane	ND<2.0	Ü	2.0	2.0	ug/L	1		M87994-8				
Chloroform	ND<1.0	Ü	1.0	1.0	ug/L	1		M87994-8				
Chloromethane	ND<2.0	Ü	2.0	2.0	ug/L	1		M87994-8				
Dichlorodifluoromethane	ND<2.0	Ü	2.0	2.0	ug/L	1		M87994-8				

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Ethylbenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8			J	
Ethylene Dibromide	ND<2.0	U	2.0	2.0	ug/L	1	ACTM M87994-8				
Hexachlorobutadiene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Isocumene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Isopropylbenzene (Cumene)	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Methyl Ethyl ketone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Methyl Isobutyl ketone	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Methyl tert-Butyl ether	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
Methylene Chloride	ND<2.0	U	2.0	2.0	ug/L	1	ACTM M87994-8				
Methylene Dibromide	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Naphthalene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Styrene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
Tetrachloroethylene	35.0		1.0		ug/L	1	ACTM M87994-8	31.5	37.9	21.9	Pass
Tetrahydrofuran	ND<10	U	10	10	ug/L	1	ACTM M87994-8				
Toluene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
Trichloroethylene	23.7		1.0		ug/L	1	ACTM M87994-8	25.4	30.2	19.1	Pass
Trichlorofluoromethane	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
Vinyl Chloride	104		1.0		ug/L	1	ACTM M87994-8	94.6	138	58.1	Pass
Xylenes,m- & p-	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
cis-1,2-Dichloroethylene	90.7		1.0		ug/L	1	ACTM M87994-8	96.5	119	73.2	Pass
cis-1,3-Dichloropropene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM M87994-8				
m-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
o-Chlorotoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
o-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
o-Xylene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
p-Chlorotoluene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
p-Dichlorobenzene	ND<1.0	U	1.0	1.0	ug/L	1	ACTM M87994-8				
sec-Butylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
sec-Dichloropropane	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
tert-Butylbenzene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				
trans-1,2-Dichloroethylene	20.3		1.0		ug/L	1	ACTM M87994-8	24.6	30.5	18.5	Pass
trans-1,3-Dichloropropene	ND<0.50	U	0.50	0.50	ug/L	1	ACTM M87994-8				
trans-1,4-Dichlorobutene	ND<5.0	U	5.0	5.0	ug/L	1	ACTM M87994-8				

#### **ATTACHMENT C-3**

**Data Quality Assessment Worksheets** 



Laboratory - SDG:

Accutest - M81183

Project:

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission # Date Samples Collected 88UT907 3/10/2009

RCP Certification Form Included:

Yes

Laboratory Case Narrative Included:

Yes

Note 1:

RLs are not specified in the RCPs but should be considered with respect to data usability

Note 2:

Blas High: reported result may be lower, RLs are accepted as reported.

SAMPLE #	Lab#	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1117643	M81183-1, -2	WT-MW-41	Freon 113	Laboratory Control Sample	135%		high	
1117644	M81183-3, -4	WT-MW-43	Freon 113	Laboratory Control Sample	135%		high	
1117645	M81183-5, -6	WT-MW-42						No QC issues
1117649	M81183-7, -8	WT-MW-48						No QC issues
1117650	M81183-9, -10	WT-MW-45						No QC issues
1117651	M81183-11, -12	WT-MW-47						No QC issues
1117663	M81183-13, -14	EQUIPMENT						No QC issues
1117662	M81183-15	TRIP BLANK						No QC issues
1117646	M81183-16, -17	WT-MW-44						No QC issues
1117647	M81183-18, -19	WT-MW-49						No QC issues
1117648	M81183-20, -21	WT-MW-46	Freon 113 Acetone Dichlorodifluoromethane	Laboratory Control Sample CCAL CCAL	131% >30% Diff >30% Diff		high non-directional non-directional	

Laboratory - SDG:

Accutest - M81204

Project: Commission # UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Date Samples Collected

88UT907 3/11/2009

RCP Certification Form Included:

Yes

Laboratory Case Narrative Included:

Yes

Note 1:

RLs are not specified in the RCPs but should be considered with respect to data usability

Note 2:

Bias High: reported result may be lower, RLs are accepted as reported.

SAMPLE #	Lab#	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1117655	M81204-1, -2	WT-MW-50						No QC issues
1117656	M81204-3, -4	WT-MW-40						No QC issues
1117657	M81204-5, -6	WT-MW-19SR						No QC issues
1117661	MB1204-7, -8	WT-MW-50						No QC issues
1117660	M81204-9	TRIP BLANK						No QC Issues
1117652	M81204-10, -11	WT-MW-57						No QC issues
1117653	M81204-12, -13	WT-MW-58						No QC issues
1117654	M81204-14, -15	WT-MW-59						No QC issues

Laboratory - SDG:

Accutest - M83376

Project:

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission #

88UT907 6/4/2009

**Date Samples Collected** 

RCP Certification Form Included: Laboratory Case Narrative Included:

Yes Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported.

SAMPLE#	M83376	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1123432	-1	WT-MW-48	Acetone	Continuing Calibration Check	>30% Diff	1110	non-directional	JOHN LITTO
1123432	-1	WT-MW-48	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123432UF	-2	WT-MW-48	No QC Issues				50.53%	
1123433	-3	WT-MW-57	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123433	-3	WT-MW-57	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123433UF	-4	WT-MW-57	No QC Issues	Control Division of Artist Control Action to the Child				
1123466	-5	CS-SB-315	Acetone	Initial Calibration Verification	>35% Diff		non-directional	
1123466	-5	CS-SB-315	Chloromethane	Continuing Calibration Check	>30% Diff		non-directional	
1123466	-5	CS-SB-315	Carbon tetrachloride	Continuing Calibration Check	>30% Diff		non-directional	
1123466	-5	CS-SB-315	Carbon tetrachloride	Laboratory Control Sample	135		high	
1123429	-6	WT-MW-47	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123429	-6	WT-MW-47	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123429UF	-7	WT-MW-47	No QC Issues	Lead at the restriction of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Control of the Contr				
1123430	-8	WT-MW-46	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123430	-8	WT-MW-46	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123430UF	-9	WT-MW-46	No QC Issues					
1123431	-10	WT-MW-49	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123431	-10	WT-MW-49	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123431UF	-11	WT-MW-49	No QC Issues					
1123426	-12	WT-MW-45	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123426	-12	WT-MW-45	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123426UF	-13	WT-MW-45	No QC Issues					
1123428	-14	WT-MW-58	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123428	-14	WT-MW-58	2,2-dichloropropane	Laboratory Control Sample	39		low	
1123428UF	-15	WT-MW-58	No QC Issues					

Laboratory - SDG:

Accutest - M83394

Project:

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission #

88UT907

**Date Samples Collected** 

6/5/2009

RCP Certification Form Included:

Laboratory Case Narrative Included:

Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported.

-	a	b	**

SAMPLE#	M83394	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1123427	-1	WT-MW-59	Acetone	Continuing Calibration Check	>30% Diff		non-directional	70.7
1123427	-1	WT-MW-59	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123427	-1	WT-MW-59	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123427	-1	WT-MW-59	Acetone	Laboratory Control Sample	140 / 138		high	
1123427	-1	WT-MW-59	2,2-dichloropropane	Laboratory Control Sample	47	65	low / non-directional	
1123427	-1	WT-MW-59	Tetrachydrofuran	Laboratory Control Sample	131 / 132		high	
1123427UF	-2	WT-MW-59	No QC Issues	entropies and better at the control of a forest property of the			44.5	
1123436	-3	WT-MW-40	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123436	-3	WT-MW-40	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123436	-3	WT-MW-40	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123436	-3	WT-MW-40	Acetone	Laboratory Control Sample	140 / 138		high	
1123436	-3	WT-MW-40	2,2-dichloropropane	Laboratory Control Sample	47	65	low / non-directional	
1123436	-3	WT-MW-40	Tetrachydrofuran	Laboratory Control Sample	131 / 132		high	
1123436UF	-4	WT-MW-40	No QC Issues	00 mile 1 direct di 1200 ed 150 🐠 0 150 e con particolor personali (120 mile 150 mi			7.7.7. <b>-</b>	
1123437	-5	WT-MW-19SR	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123437	-5	WT-MW-19SR	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123437	-5	WT-MW-19SR	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123437	-5	WT-MW-19SR	Acetone	Laboratory Control Sample	140 / 138		high	
1123437	-5	WT-MW-19SR	2,2-dichloropropane	Laboratory Control Sample	47	65	low / non-directional	
1123437	-5	WT-MW-19SR	Tetrachydrofuran	Laboratory Control Sample	131 / 132		high	
113437UF	-6	WT-MW-19SR	No QC Issues					
1123434	-7	WT-MW-41	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123434	-7	WT-MW-41	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123434	-7	WT-MW-41	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123434	-7	WT-MW-41	Acetone	Laboratory Control Sample	140 / 138		high	
1123434	-7	WT-MW-41	2,2-dichloropropane	Laboratory Control Sample	47	65	low / non-directional	
1123434	-7	WT-MW-41	Tetrachydrofuran	Laboratory Control Sample	131 / 132		high	
1123434UF	-8	WT-MW-41	No QC Issues					
1123435	-9	WT-MW-42	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123435	-9	WT-MW-42	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123435	-9	WT-MW-42	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123435	-9	WT-MW-42	Acetone	Laboratory Control Sample	140 / 138		high	
1123435	-9	WT-MW-42	2,2-dichloropropane	Laboratory Control Sample	47	65	low / non-directiona	
1123435	-9	WT-MW-42	Tetrachydrofuran	Laboratory Control Sample	131 / 132		high	

1123435UF	-10	WT-MW-42	No QC Issues					
1123443	-11	Trip Blank	Acetone	Continuing Calibration Check	>30% Diff		non discotional	
1123443	-11	Trip Blank	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123443	-11	Trip Blank	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123443	-11	Trip Blank	Acetone	Laboratory Control Sample	140 / 138		non-directional	
1123443	-11	Trip Blank	2,2-dichloropropane	Laboratory Control Sample	47	CE	high	
1123443	-11	Trip Blank	Tetrachydrofuran	Laboratory Control Sample	131 / 132	65	low / non-directional	
1123444	-12	Equipment Blank	Acetone	Continuing Calibration Check	>30% Diff		high	
1123444	-12	Equipment Blank	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123444	-12	Equipment Blank	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123444	-12	Equipment Blank	Acetone	Laboratory Control Sample	140 / 138		non-directional	
1123444	-12	Equipment Blank	2,2-dichloropropane	Laboratory Control Sample	47	05	high	
1123444	-12	Equipment Blank	Tetrachydrofuran	Laboratory Control Sample	131 / 132	65	low / non-directional	
112344UF	-13	Equipment Blank	No QC Issues	Caboratory Control Sample	1317132		high	
1123441	-14	WT-MW-44	Acetone	Continuing Calibration Check	>30% Diff			
1123441	-14	WT-MW-44	Acrylonitrile	Continuing Calibration Check	>30% Diff		non-directional	
1123441	-14	WT-MW-44	2,2-dichloropropane	Continuing Calibration Check			non-directional	
1123441	-14	WT-MW-44	Acetone	Laboratory Control Sample	>30% Diff 140 / 138		non-directional	
1123441	-14	WT-MW-44	2,2-dichloropropane	Laboratory Control Sample		0.5	high	
1123441	-14	WT-MW-44	Tetrachydrofuran	Laboratory Control Sample	47	65	low / non-directional	
1123441	-14	WT-MW-44	Acrylonitrile	MS/MSD	131 / 132		high	
1123441	-14	WT-MW-44	Chloromethane	MS/MSD	143 / 141		high	
1123441	-14	WT-MW-44	Napthalene	MS/MSD	142 / 150		high	
1123441	-14	WT-MW-44	Tetrachydrofuran	MS/MSD	66		low	
1123441	-14	WT-MW-44	Vinyl Chloride	MS/MSD	147 / 145		high	
1123441UF	-15	WT-MW-44	No QC Issues	MISTINISD	137 / 138		high	
1123438	-16	WT-MW-50	Acetone	Continuing Calibration Check	>200/ D:#		and discollent	
1123438	-16	WT-MW-50	Acrylonitrile	[ - 1 1 1 1 1 1 1 1	>30% Diff		non-directional	
1123438	-16	WT-MW-50	2,2-dichloropropane	Continuing Calibration Check	>30% Diff		non-directional	
1123438	-16	WT-MW-50	Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1123438	-16	WT-MW-50	2,2-dichloropropane	Laboratory Control Sample	140 / 138	0.5	high	
1123438	-16	WT-MW-50		Laboratory Control Sample	47	65	low / non-directional	
1123438UF	-17	WT-MW-50	Tetrachydrofuran No QC Issues	Laboratory Control Sample	131 / 132		high	
1123439	-18	WT-MW-50		0	0001 5:5			
1123433	-10	VV 1-IVIVV-5U	Acetone	Continuing Calibration Check	>30% Diff		non-directional	

Laboratory - SDG:

Accutest - M85689

Project:

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission #

88UT907

**Date Samples Collected** 

9/9/2009

RCP Certification Form Included: Laboratory Case Narrative Included: Yes Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported. Bias Low: reported result may be higher, RLs may be higher

AMPLE #	Lab#	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
130880	M85689-1	WT-MW-57	Acetone	Laboratory Control Sample	135		high	
			Chloromethane	Laboratory Control Sample	69		low	
			Isopropylbenzene	Laboratory Control Sample	132		high	
			2-Hexanone	Initial Calibration Verification				Quadratic regression used
			Naphthalene	Initial Calibration Verification				Quadratic regression used
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
			Bromomethane	Continuing Calibration Check	>30% Diff		non-directional	
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
130880uf	M85689-2	WT-MW-57	No QC Issues					
130879	M85689-3	WT-MW-47	Acetone	Laboratory Control Sample	135		high	
			Chloromethane	Laboratory Control Sample	69		low	
			Isopropylbenzene	Laboratory Control Sample	132		high	
	(w)		2-Hexanone	Initial Calibration Verification				Quadratic regression used
			Naphthalene	Initial Calibration Verification				Quadratic regression used
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	. <del></del>
			Bromomethane	Continuing Calibration Check	>30% Diff		non-directional	
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
130879uf	M85689-4	WT-MW-47	No QC Issues					
130877	M85689-5	TRIP BLANK	Acetone	Laboratory Control Sample	135		high	
			Chloromethane	Laboratory Control Sample	69		low	
			Isopropylbenzene	Laboratory Control Sample	132		high	
			2-Hexanone	Initial Calibration Verification				Quadratic regression used
			Naphthalene	Initial Calibration Verification				Quadratic regression used
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
			Bromomethane	Continuing Calibration Check	>30% Diff		non-directional	
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	

Laboratory - SDG:

Accutest - M85739

Project:

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission #

88UT907

**Date Samples Collected** 

9/10/2009

RCP Certification Form Included:

Yes

Laboratory Case Narrative Included:

Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported.

SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1130878	M85739-1	WT-MW-41	Isopropylbenzene 2,2-dichloropropane	Laboratory Control Sample Initial Calibration Verification	145		high	Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
130878uf	M85739-2	WT-MW-41	No QC Issues					
130881	M85739-3	WT-MW-44	Isopropylbenzene	Laboratory Control Sample	145		high	
			2,2-dichloropropane	Initial Calibration Verification				Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
		Э	Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
130881uf	M85739-4	WT-MW-44	No QC Issues					
130882	M85739-5	WT-MW-46	Isopropylbenzene	Laboratory Control Sample	145		high	alle capital out converge control of
			2,2-dichloropropane	Initial Calibration Verification	0.000.000			Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
130882uf	M85739-6	WT-MW-46	No QC Issues					
130883	M85739-7	WT-MW-48	Isopropylbenzene 2,2-dichloropropane	Laboratory Control Sample Initial Calibration Verification	145		high	Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	addition of control acco
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
1130883uf	M85739-8	WT-MW-48	No QC Issues					
1130885	M85739-9	WT-MW-42	Isopropylbenzene	Laboratory Control Sample	145		high	
			2,2-dichloropropane	Initial Calibration Verification				Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
			Isopropylbenzene	Continuing Calibration Check	>30% Diff		non-directional	
130885uf	M85739-10	WT-MW-42	No QC Issues					
885uf	M85739-10	WT-MW-42	No QC Issues					

1130886	M85739-11	WT-MW-43	Isopropylbenzene 2,2-dichloropropane Dichlorodifluoromethane Isopropylbenzene	Laboratory Control Sample Initial Calibration Verification Initial Calibration Verification Continuing Calibration Check	145 >35% Diff >30% Diff	high non-directional non-directional	Quadratic regression used
1130886uf	M85739-12	WT-MW-43	No QC Issues				
1130887	M85739-13	WT-MW-49	Isopropylbenzene 2,2-dichloropropane Dichlorodifluoromethane Isopropylbenzene	Laboratory Control Sample Initial Calibration Verification Initial Calibration Verification Continuing Calibration Check	145 >35% Diff >30% Diff	high non-directional non-directional	Quadratic regression used
1130887uf	M85739-14	WT-MW-49	No QC Issues				
1130888	M85739-15	WT-MW-45	Isopropylbenzene 2,2-dichloropropane Dichlorodifluoromethane Isopropylbenzene	Laboratory Control Sample Initial Calibration Verification Initial Calibration Verification Continuing Calibration Check	145 >35% Diff >30% Diff	high non-directional non-directional	Quadratic regression used
1130888uf	M85739-16	WT-MW-45	No QC Issues				
1130889	M85739-17	TRIP BLANK	Isopropylbenzene 2,2-dichloropropane Dichlorodifluoromethane Isopropylbenzene	Laboratory Control Sample Initial Calibration Verification Initial Calibration Verification Continuing Calibration Check	145 >35% Diff >30% Diff	high non-directional non-directional	Quadratic regression used

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Laboratory - SDG:

Accutest - M85761

Project:

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission #

88UT907

**Date Samples Collected** 

9/11/2009

RCP Certification Form Included:

Yes

Laboratory Case Narrative Included:

Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported. Bias Low: reported result may be higher, RLs may be higher

SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1130891	M85761-1	WT-MW-59	1,2-Dibromo-3-chloropropane	Laboratory Control Sample	131		high	
			Isopropylbenzene	Laboratory Control Sample	147 / 153		high	
			Naphthalene	Laboratory Control Sample	134 / 138		high	
			1,1,2,2-Tetrachloroethane	Laboratory Control Sample	131 / 136		high	
			1,2,4-Trichlorobenzene	Laboratory Control Sample	131		high	
			2,2-dichloropropane	Initial Calibration Verification				Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1130891uf	M85761-2	WT-MW-59	No QC Issues					
1130890	M85761-3	WT-MW-19SR	1,2-Dibromo-3-chloropropane	Laboratory Control Sample	131		high	
			Isopropylbenzene	Laboratory Control Sample	147 / 153		high	
			Naphthalene	Laboratory Control Sample	134 / 138		high	
			1,1,2,2-Tetrachloroethane	Laboratory Control Sample	131 / 136		high	
			1,2,4-Trichlorobenzene	Laboratory Control Sample	131		high	
			2,2-dichloropropane	Initial Calibration Verification				Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1130890uf	M85761-4	WT-MW-19SR	No QC Issues					
1130897	M85761-5	WT-MW-40	1,2-Dibromo-3-chloropropane	Laboratory Control Sample	131		high	
			Isopropylbenzene	Laboratory Control Sample	147 / 153		high	
			Naphthalene	Laboratory Control Sample	134 / 138		high	
			1,1,2,2-Tetrachloroethane	Laboratory Control Sample	131 / 136		high	
			1,2,4-Trichlorobenzene	Laboratory Control Sample	131		high	
			2,2-dichloropropane	Initial Calibration Verification			W 92 D	Quadratic regression used
			Dichlorodifluoromethane	Initial Calibration Verification	>35% Diff		non-directional	
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1130897uf	M85761-6	WT-MW-40	No QC Issues					
1130895	M85761-7	WT-MW-50	1,2-Dibromo-3-chloropropane	Laboratory Control Sample	131		high	
			Isopropylbenzene	Laboratory Control Sample	147 / 153		high	

			Naphthalene 1,1,2,2-Tetrachloroethane 1,2,4-Trichlorobenzene 2,2-dichloropropane	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Verification	134 / 138 131 / 136 131	high high high	Quadratic regression used
			Dichlorodifluoromethane Acetone	Initial Calibration Verification Continuing Calibration Check	>35% Diff >30% Diff	non-directional non-directional	
1130949	M85761-8	TRIP BLANK	1,2,3-Trichlorobenzene Acetone Naphthalene Chloromethane Acetone 2-Butanone 2-Hexanone	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	158 / 137 150 / 149 149 / 132 >30% Diff >30% Diff >30% Diff	high high high non-directional non-directional non-directional	Quadratic regression used
1130950	M85761-9	EQUIPMENT	1,2,3-Trichlorobenzene Acetone Naphthalene Chloromethane Acetone 2-Butanone 2-Hexanone	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	158 / 137 150 / 149 149 / 132 >30% Diff >30% Diff >30% Diff	high high non-directional non-directional non-directional	Quadratic regression used
1130950uf	M85761-10	EQUIPMENT	No QC Issues				
1130894	M85761-11	PERFORMANCE	No QC Issues				
1130893	M85761-12	PERFORMANCE	1,2,3-Trichlorobenzene Acetone Naphthalene Chloromethane Acetone 2-Butanone 2-Hexanone	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	158 / 137 150 / 149 149 / 132 >30% Diff >30% Diff >30% Diff	high high high non-directional non-directional non-directional	Quadratic regression used
1130893uf	M85761-13	PERFORMANCE	No QC Issues				
1130892	M85761-14	WT-MW-58	1,2,3-Trichlorobenzene Acetone Naphthalene	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample	158 / 137 150 / 149 149 / 132	high high high	*
			Chloromethane Acetone 2-Butanone 2-Hexanone	Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	>30% Diff >30% Diff >30% Diff	non-directional non-directional non-directional	Quadratic regression used
1130892uf	M85761-15	WT-MW-58	No QC Issues				
1130895uf	M85761-16	WT-MW-50	No QC Issues				
1130896	M85761-17	WT-MW-50	1,2,3-Trichlorobenzene	Laboratory Control Sample	158 / 137	high	

			Acetone	Laboratory Control Sample	150 / 149	high	
			Naphthalene	Laboratory Control Sample	149 / 132	high	
			Chloromethane	Initial Calibration Verification			Quadratic regression used
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	00-700 TO 1400 March 1900 To 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900 March 1900
			2-Butanone	Continuing Calibration Check	>30% Diff	non-directional	
			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
1130896uf	M85761-18	WT-MW-50	No QC Issues				

Laboratory - SDG:

Accutest - M87915

Project: Commission # UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Date Samples Collected

88UT907 12/8/2009

RCP Certification Form Included:

Yes

Laboratory Case Narrative Included:

Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported.

SAMPLE #	Lab#	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
136013	-1	WT-MW-50	Chloroethane	Laboratory Control Sample	67		low	
			Chloromethane	Laboratory Control Sample	64 / 66		low	
			2-Hexanone	Laboratory Control Sample	134		high	
			Acetone	MS/MSD	47 / 45		low	
			Acrylonitrile	MS/MSD	67 / 68		low	
			2-Butanone	MS/MSD	53 / 55		low	
			Carbon Disulfide	MS/MSD	68 / 69		low	
			Chloroethane	MS/MSD	69 / 67		low	
			Chloromethane	MS/MSD	64 / 62		low	
			Tetrahydrofuran	MS/MSD	66		low	
			Acetone	Initial Calibration Standard				Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard				Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard				Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard				Quadratic regression used
			Naphthalene	Initial Calibration Standard				Quadratic regression used
			Acetone	Initial Calibration Verification	>35% Diff		non-directional	
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff		non-directional	
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
			2-Hexanone	Continuing Calibration Check	>30% Diff		non-directional	
136013uf	-2	WT-MW-50	No QC Issues					
136028	-3	WT-MW-50	Acetone	Laboratory Control Sample	151 / 147		high	
			2-Butanone	Laboratory Control Sample	131		high	
			2-Hexanone	Laboratory Control Sample	146 / 137		high	
			Bromomethane	Initial Calibration Standard				Quadratic regression used
			Freon-113	Initial Calibration Standard				Quadratic regression used
			Acetone	Initial Calibration Standard				Quadratic regression used
			2-Hexanone	Initial Calibration Standard				Quadratic regression used
			1,2-Dibromo-3-chloropropane	Initial Calibration Standard				Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard				Quadratic regression used
			Naphthalene	Initial Calibration Standard				Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard				Quadratic regression used
			Acetone	Continuing Calibration Check	>30% Diff		non-directional	
1136028uf	-4	WT-MW-50	No QC Issues	Continuing Campitation Officer	0070 0111		non anodional	
1136014	-5	WT-MW-45	Chloroethane	Laboratory Control Sample	67		low	
1,00014	-3	A 1 - MI A A+ 2	Onlordetrane	Laboratory Control Cample	0.		1011	

			Chloromethane 2-Hexanone Acetone 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene Naphthalene Acetone Dichlorodifluoromethane Acetone 2-Hexanone	Laboratory Control Sample Laboratory Control Sample Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	64 / 66 134 >35% Diff >30% Diff >30% Diff >30% Diff	non-directional non-directional non-directional non-directional	Quadratic regression used Quadratic regression used Quadratic regression used Quadratic regression used Quadratic regression used
136014uf	-6	WT-MW-45	No QC Issues	7 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2		A STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STATE OF THE STA	
1136011	-7	WT-MW-44	Chloroethane Chloromethane 2-Hexanone Acetone 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard	67 64 / 66 134	Iow Iow high	Quadratic regression used Quadratic regression used Quadratic regression used Quadratic regression used
			Naphthalene Acetone Dichlorodifluoromethane Acetone 2-Hexanone	Initial Calibration Standard Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	>35% Diff >30% Diff >30% Diff >30% Diff	non-directional non-directional non-directional	Quadratic regression used
136011uf	-8	WT-MW-44	No QC Issues	Continuing Company on Continuing		non an obtona	
136012	-9	WT-MW-40	Chloroethane Chloromethane 2-Hexanone Acetone 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard	67 64 / 66 134	low low high	Quadratic regression used Quadratic regression used Quadratic regression used Quadratic regression used
			Naphthalene Acetone Dichlorodifluoromethane Acetone 2-Hexanone	Initial Calibration Standard Initial Calibration Verification Continuing Calibration Check Continuing Calibration Check Continuing Calibration Check	>35% Diff >30% Diff >30% Diff >30% Diff	non-directional non-directional non-directional non-directional	Quadratic regression used
1136012uf	-10	WT-MW-40	No QC Issues	Laboratoni Control Samula	67	low	
1136010	-11	WT-MW-57	Chloroethane Chloromethane 2-Hexanone Acetone 1,2,3-Trichloropropane 1,2,4-Trichlorobenzene 1,2,3-Trichlorobenzene Naphthalene	Laboratory Control Sample Laboratory Control Sample Laboratory Control Sample Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard Initial Calibration Standard	64 / 66 134	low Iow high	Quadratic regression used Quadratic regression used Quadratic regression used Quadratic regression used Quadratic regression used
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	

F

			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
136010uf	-12	WT-MW-57	No QC Issues				
1136007	-13	WT-MW-43	Chloroethane	Laboratory Control Sample	67	low	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
			2-Hexanone	Laboratory Control Sample	134	high	
			Acetone	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard			Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			Naphthalene	Initial Calibration Standard			Quadratic regression used
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	Quadratic regression used
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
				기계 가면 하면 하는 사람이 되었다. 그리고 있는 것이 하는 것이 하는 것이 없는 것이 없는데 없다.			
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
1120007.4		NACT ARIAL AD	2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
1136007uf	-14	WT-MW-43	No QC Issues		70.00		
1136008	-15	WT-MW-42	Chloroethane	Laboratory Control Sample	67	low	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
			2-Hexanone	Laboratory Control Sample	134	high	
			Acetone	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard			Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			Naphthalene	Initial Calibration Standard			Quadratic regression used
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
1136008uf	-16	WT-MW-42	No QC Issues	Continuing Cambration Officer	- 00 /0 Dill	Tion directional	
1136009	-17	WT-MW-41	Chloroethane	Laboratory Control Sample	67	low	
1100000		A A 1 - 101 A A 4 1	Chloromethane	Laboratory Control Sample	64 / 66	low	
			2-Hexanone	Laboratory Control Sample	134	high	
				Initial Calibration Standard	134	Ingii	Quadratic regression used
			Acetone	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane				
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			Naphthalene	Initial Calibration Standard	- Narrower	2000 00 A CONTROL OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY OF THE PARTY	Quadratic regression used
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
1136009uf	-18	WT-MW-41	No QC Issues				
1136017	-19	WT-MW-47	Chloroethane	Laboratory Control Sample	67	low	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
			2-Hexanone	Laboratory Control Sample	134	high	

			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
		1	Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	
		7	Naphthalene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard			Quadratic regression used
			Acetone	Initial Calibration Standard			Quadratic regression used
			2-Hexanone	Laboratory Control Sample	134	high	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
36027	-24	EQUIPMENT	Chloroethane	Laboratory Control Sample	67	low	
36016uf	-23	WT-MW-48	No QC Issues	11	07		
20040-4	22	NACT ANAL 40	2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check		non-directional	
				Continuing Calibration Check	>30% Diff		
			Dichlorodifluoromethane	Initial Calibration Verification	>30% Diff	non-directional	
			Acetone		>35% Diff	non-directional	addutatio regression used
			Naphthalene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard			Quadratic regression used
			Acetone	Initial Calibration Standard	never n		Quadratic regression used
			2-Hexanone	Laboratory Control Sample	134	high	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
6016	-22	WT-MW-48	Chloroethane	Laboratory Control Sample	67	low	
6015uf	-21	WT-MW-49	No QC Issues				
			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	
		40	Naphthalene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard			Quadratic regression used
			Acetone	Initial Calibration Standard			Quadratic regression used
			2-Hexanone	Laboratory Control Sample	134	high	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
6015	-20	WT-MW-49	Chloroethane	Laboratory Control Sample	67	low	
COLE	20	VACT ANAL 40	2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	Quadratic regression used
			Naphthalene	Initial Calibration Standard			
			1.2.3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			이 경기 등이 가지 않는 것이 되었다. 그런 사람이 살아 되었다면 하지?	[ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [ [			Quadratic regression used Quadratic regression used
				1,2,3-Trichloropropane 1,2,4-Trichlorobenzene	1,2,4-Trichlorobenzene Initial Calibration Standard	1,2,4-Trichlorobenzene Initial Calibration Standard	1,2,4-Trichlorobenzene Initial Calibration Standard

1136026	-26	TRIP BLANK	Chloroethane	Laboratory Control Sample	67	low	
			Chloromethane	Laboratory Control Sample	64 / 66	low	
			2-Hexanone	Laboratory Control Sample	134	high	
			Acetone	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichloropropane	Initial Calibration Standard			Quadratic regression used
			1,2,4-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			1,2,3-Trichlorobenzene	Initial Calibration Standard			Quadratic regression used
			Naphthalene	Initial Calibration Standard			Quadratic regression used
			Acetone	Initial Calibration Verification	>35% Diff	non-directional	52
			Dichlorodifluoromethane	Continuing Calibration Check	>30% Diff	non-directional	
			Acetone	Continuing Calibration Check	>30% Diff	non-directional	
			2-Hexanone	Continuing Calibration Check	>30% Diff	non-directional	
1136017uf	-27	WT-MW-47	No QC Issues				

Laboratory - SDG: Project:

Accutest - M87994

UTC: Willow Brook & Pond 2009 Quarterly GW Monitoring

Commission #

88UT907

**Date Samples Collected** 

12/9/2009

RCP Certification Form Included:

Yes

Laboratory Case Narrative Included:

Yes

Note 1:

Bias High: reported result may be lower, RLs are accepted as reported. Bias Low: reported result may be higher, RLs may be higher

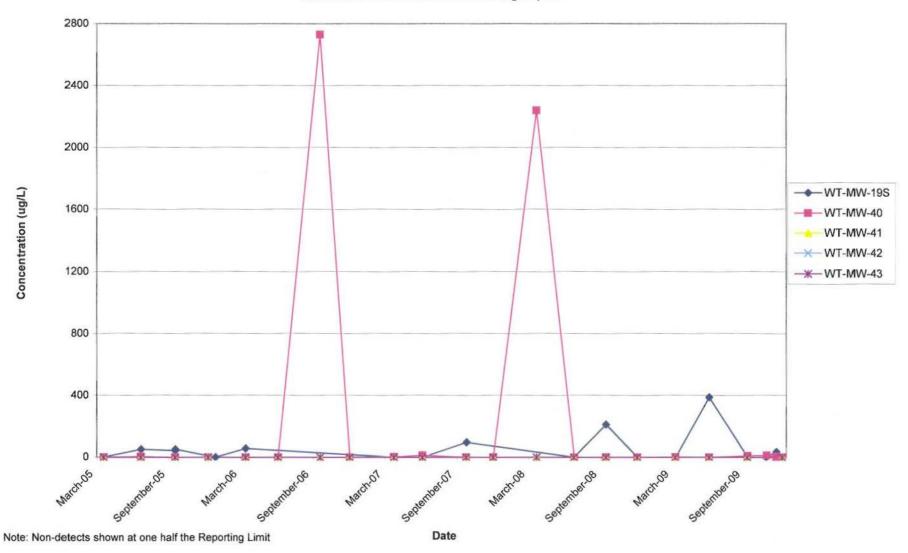
SAMPLE #	Lab #	Location ID	COMPOUND	QC OUTLIER	%R	RPD	BIAS	COMMENTS
1136019	-1	WT-MW-46	Dichlorodifluoromethane	Laboratory Control Sample	61 / 61		low	
			Tetrachloroethylene	Laboratory Control Sample	131		high	
1136019uf	-2	WT-MW-46	No QC Issues					
1136020	-3	WT-MW-58	Dichlorodifluoromethane	Laboratory Control Sample	61 / 61		low	
			Tetrachloroethylene	Laboratory Control Sample	131		high	
1136020uf	-4	WT-MW-58	No QC Issues					
1136021	-5	WT-MW-59	Dichlorodifluoromethane	Laboratory Control Sample	61 / 61		low	
			Tetrachloroethylene	Laboratory Control Sample	131		high	
1136021uf	-6	WT-MW-59	No QC Issues					
1136025	-7	TRIP BLANK	Dichlorodifluoromethane	Laboratory Control Sample	61 / 61		low	
			Tetrachloroethylene	Laboratory Control Sample	131		high	
1136024	-8	PE Sample	Dichlorodifluoromethane	Laboratory Control Sample	61 / 61		low	
		and the second second	Tetrachloroethylene	Laboratory Control Sample	131		high	

#### Appendix D

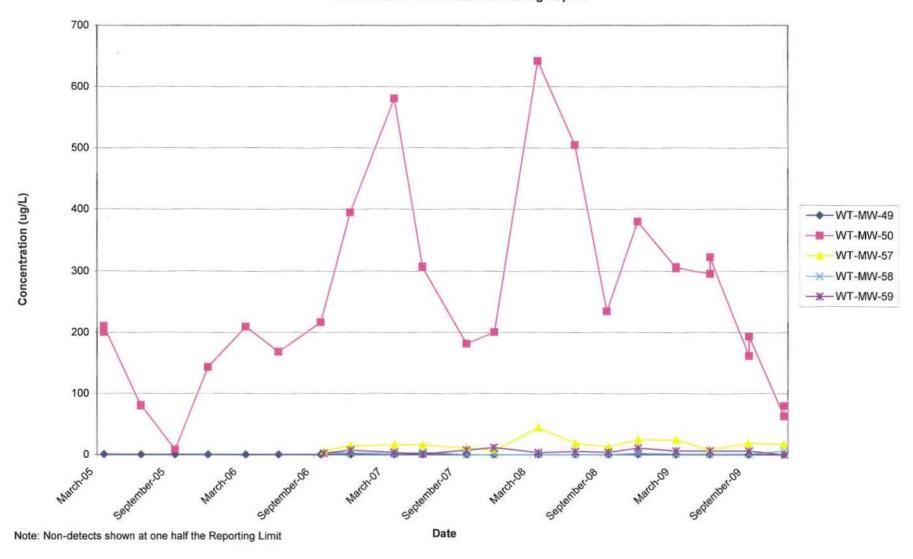
**Select Constituent Concentration Graphs** 



Trichloroethylene (TCE)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report

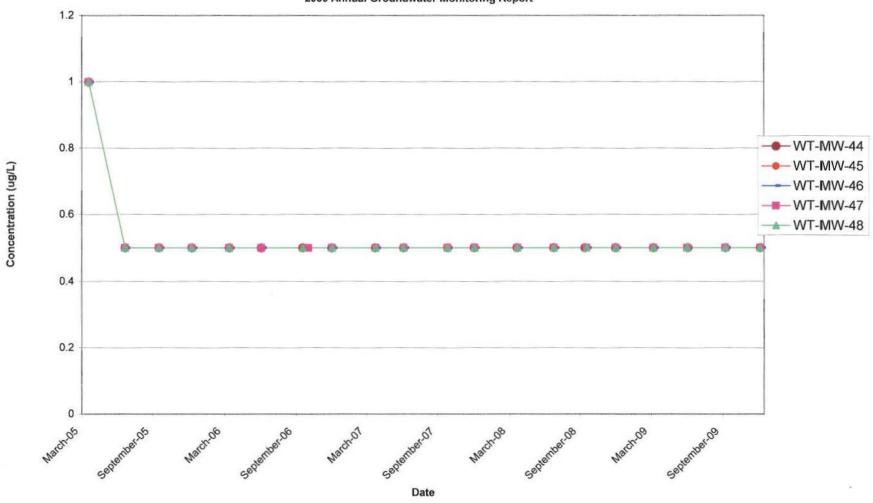


Trichloroethylene (TCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report



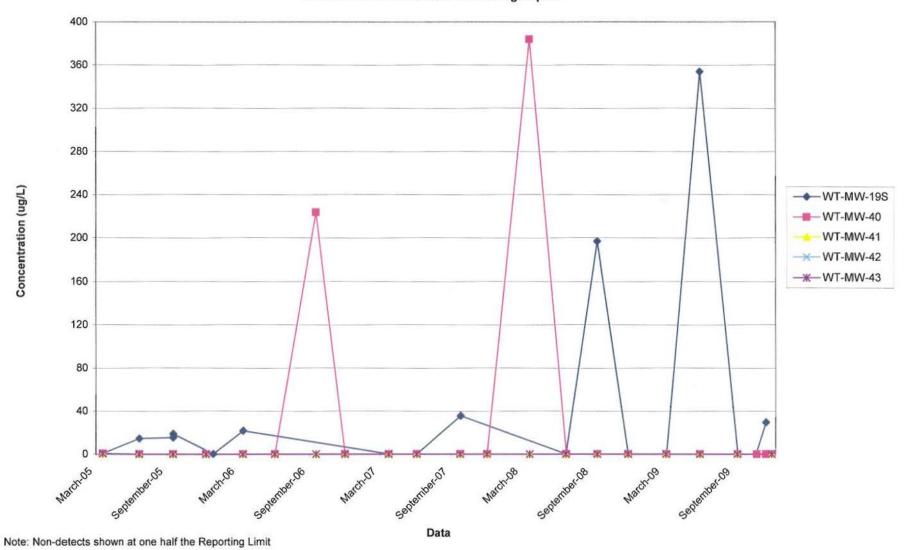
Trichloroethylene (TCE)

Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report

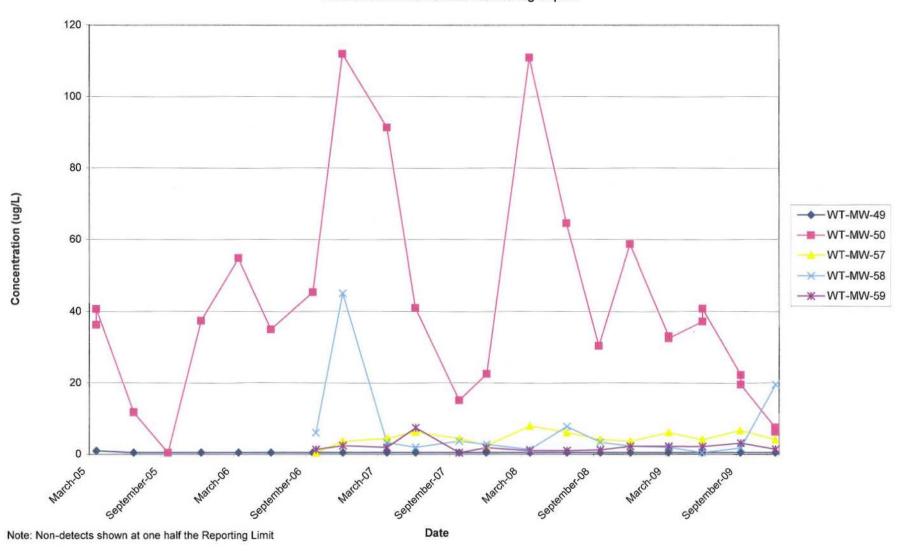


Note: Non-detects shown at one half the Reporting Limit

Tetrachloroethylene (PCE)
Pratt & Whitney, East Harford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report



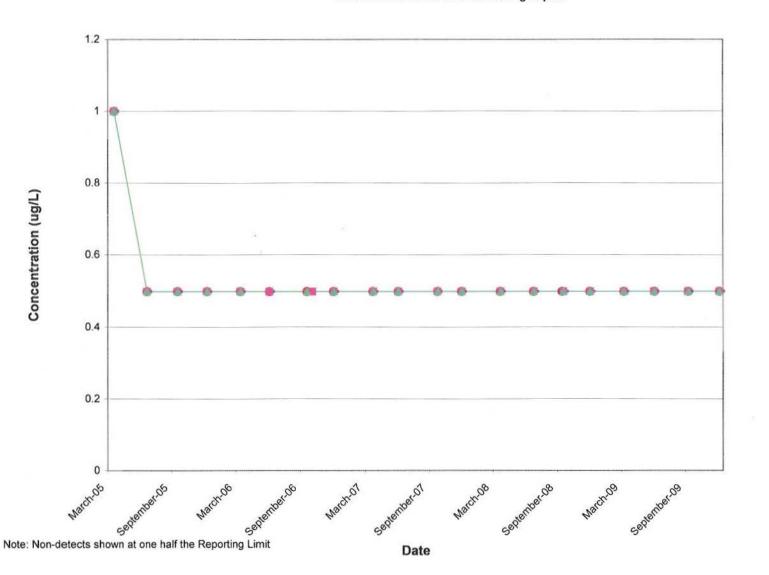
Tetrachloroethylene (PCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report



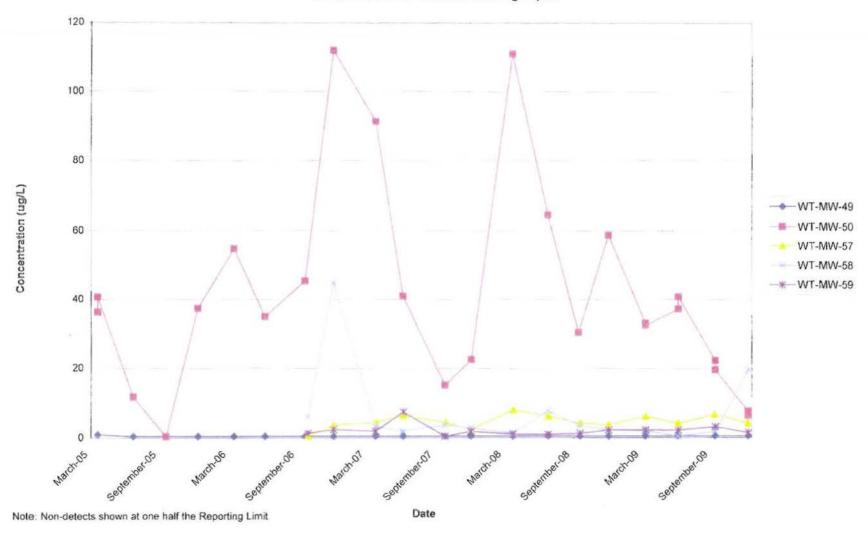
Tetrachloroethylene (PCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report

● WT-MW-44 ● WT-MW-45 ■ WT-MW-46 ■ WT-MW-47

──WT-MW-48



Tetrachloroethylene (PCE)
Pratt & Whitney, East Hartford, Connecticut: Willow Brook and Willow Brook Pond
2009 Annual Groundwater Monitoring Report



#### Appendix E

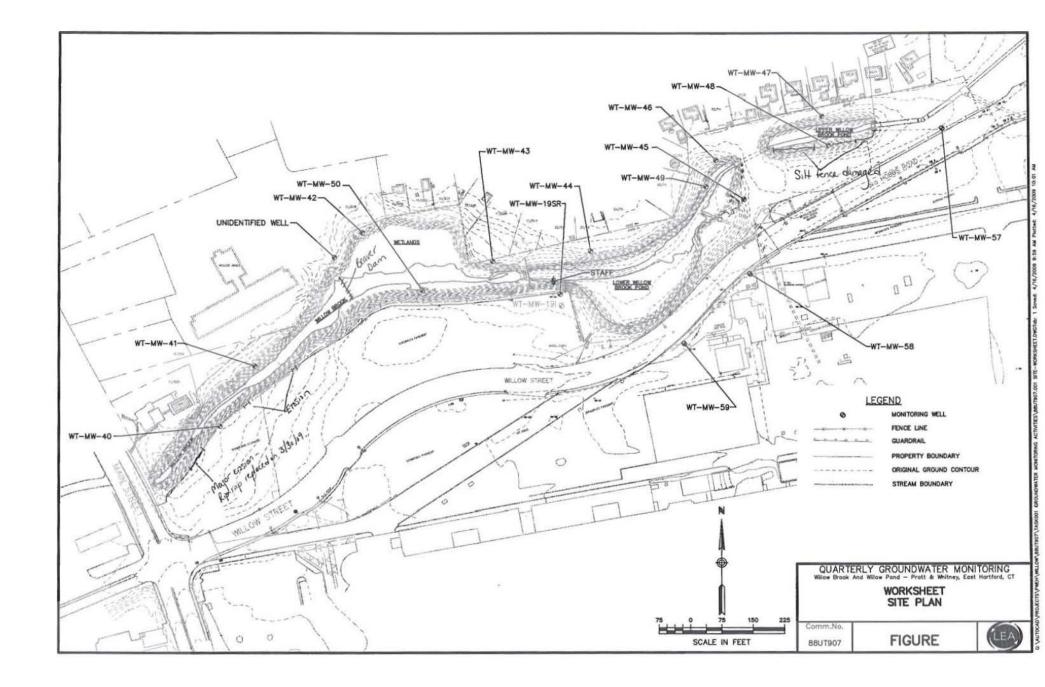
**Post-Remediation Maintenance Monitoring Forms** 



## United Technologies/Pratt & Whitney Post Remediation Maintenance and Monitoring Program Willow Brook and Willow Brook Pond

Weather Conditions: light a	Inspector: Scott Brown Reviewed By: Robus MyConcu			
Inspection Date: 3/1/09 Inspection Time: /3:30	Reviewed By: Robin McKinner	1		
	/	-		,
INSPECTION POINT	DESCRIPTION	GOOD	FAIR	POOR
1) Signs of erosion	Check for gullies of more than 2 inches in depth.			X
2) Signs of settling	Look for ponding and for settling of soil of more than 3 inches over a 5 sq. foot area.	X		
3) Loss of vegetative cover	Check for loss of vegetation cover in any area greater than 5 square feet.	X		
4) Undesirable growth	Check for growth that is in excess of ½ inch in diameter (woody vegetation) and taller than 2 feet.			X
5) Signs of ponding and run on	Look for areas of more than 5 square feet of standing water or areas where surface water is running onto cap.	X		
6) Condition of fencing and gates	Check perimeter fence to make sure it is not damaged (no holes greater than 4-inches in diameter), gates are operable, and locks are in place.	X		
<ol> <li>Condition of rip-rap in Willow Brook stream channel</li> </ol>	Observe entire length of stream channel. Verify that rip-rap has not been displaced.	X		
8) Condition of stone layer in Willow Brook	Perform probing of bottom of Willow Brook Ponds at 5 locations in upper pond and 15 locations within lower pond. Verify refusal on stone layer at all locations.	X		
9) Burrowing animals	Verify no holes larger than 2 inches in diameter in cap.			X
10) Monitoring well network	Check concrete collar protective casing, locks, legible well identification.	X		
	1.Condition of lock	X		
	2.Visible ID of wells	X		
	3.Ponding or infiltration of surface water	X		
	4.Condition of concrete collar	X	-	
	5.Condition of steel casing	X		
List all deficiencies, the correcti	esignated representative of Pratt & Whitney we measures taken, and the date corrective measures were no mostly near fence led bank was replaced with ap-rap	-		ing area.
Corrective Action: The end	led bank was replaced with up-rap	on Mo	uch 3	0,2019
	so overfrowth throughout whole ar		1.	. / 1
Corrective Action: (EA rec	commends tramming the overgrowth -	to keep	wells	usible.
	roung trees in Wetland area and Li	ower W	llow (	Brook Pond
Corrective Action: are ado		Chr. William		and the second
4) CEA recommends	removal of the beaver dam.	-11(4)		

Corrective Action:



## United Technologies/Pratt & Whitney Post Remediation Maintenance and Monitoring Program Willow Brook and Willow Brook Pond

INSPECTION POINT	DESCRIPTION	GOOD	FAIR	POOR
1) Signs of erosion	Check for gullies of more than 2 inches in depth.	GOOD	1	100
2) Signs of settling	Look for ponding and for settling of soil of more than 3 inches over a 5 sq. foot area.	/		
3) Loss of vegetative cover	Check for loss of vegetation cover in any area greater than 5 square feet.	/		
4) Undesirable growth	Check for growth that is in excess of ½ inch in diameter (woody vegetation) and taller than 2 feet.		/	
5) Signs of ponding and run on	Look for areas of more than 5 square feet of standing water or areas where surface water is running onto cap.	/		
6) Condition of fencing and gates	Check perimeter fence to make sure it is not damaged (no holes greater than 4-inches in diameter), gates are operable, and locks are in place.	/		
7) Condition of rip-rap in Willow Brook stream channel	Observe entire length of stream channel. Verify that rip-rap has not been displaced.	/		
8) Condition of stone layer in Willow Brook	Perform probing of bottom of Willow Brook Ponds at 5 locations in upper pond and 15 locations within lower pond. Verify refusal on stone layer at all locations.	/		
9) Burrowing animals	Verify no holes larger than 2 inches in diameter in cap.	/		
10) Monitoring well network	Check concrete collar protective casing, locks, legible well identification.	/		
	1.Condition of lock			V
	2.Visible ID of wells		,	I V
	3.Ponding or infiltration of surface water		/	
	4.Condition of concrete collar	/		
	5.Condition of steel casing			
List all deficiencies, the correcti  1) See attache	esignated representative of Pratt & Whitney we measures taken, and the date corrective measures were ad report.	e complete	d:	
Corrective Action:				
2)				
Corrective Action:			-	
3)				
Corrective Action:				
4)				
Corrective Action:				

## Willow Brook & Willow Pond Inspection Report (inspection conducted July 23, 2009)

An inspection of the Willow Pond engineered cap was completed by LEA personnel on July 23, 2009. The following is a list of maintenance issues identified during the inspection, along with recommended corrective actions.

1.) Significant erosion was observed along the southern bank of Willow Brook, just west of the man-made dam and north of the Willow Street parking lot.

Corrective Action: Repair with rip rap.

2.) The timber retaining wall forming the eastern side of the man-made dam is still in need of repair. Many of the timbers comprising the wall are severely rotted and the bank behind the wall has been washed out in a few locations.

Corrective Action: Repair or replace retaining wall.

3.) A few small areas of erosion were identified along the southern edge of Upper Willow Brook Pond. The erosion is most noticeable where the soil, the silt fence and the rip rap meet.

Corrective Action: Remove silt fence and continue to monitor the area.

4.) Clusters of trees that are approximately 0.5 to 2 inches in diameter have taken root above the cap in the rip rap located around the perimeter of Upper Willow Brook Pond and along the eastern perimeter of Lower Willow Brook Pond.

Corrective Action: Cut and remove trees to prevent damage to the cap.

5.) The beaver dam previously identified in the wetland area, downstream of the man-made dam is still intact and has bushes growing on it.

Corrective Action: Remove beavers and dam.

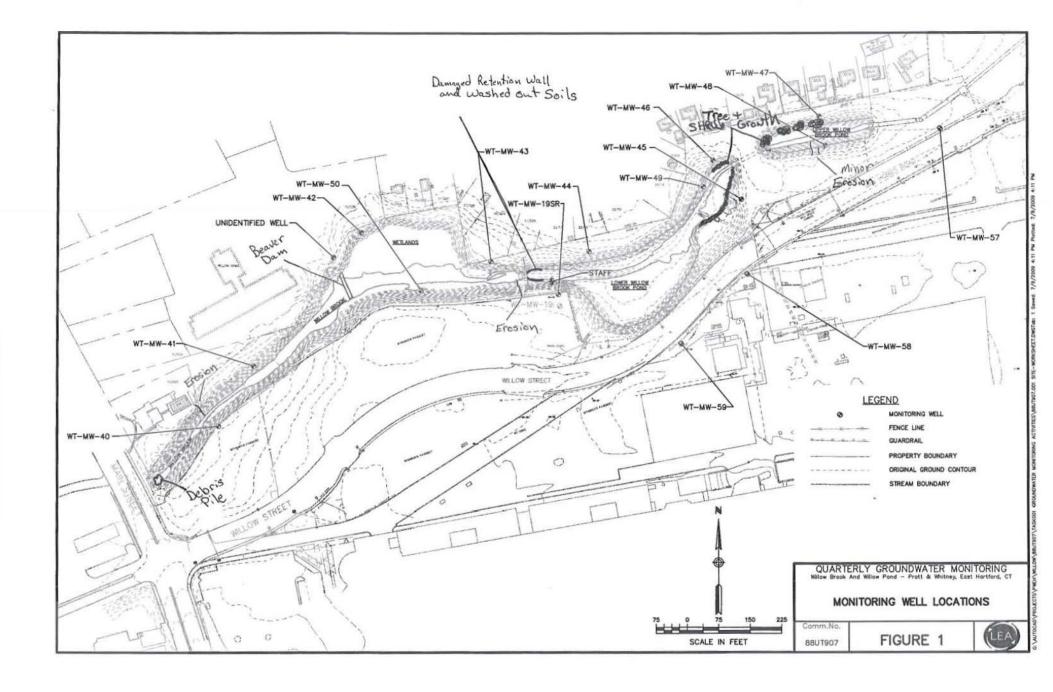
6.) A large debris pile consisting of logs, branches, sticks and garbage is located across Willow Brook in front of the culvert that runs beneath Main Street, on the western border of the Pratt & Whitney property.

Corrective Action: Remove debris pile to prevent flooding.

7.) As previously noted, a large washout is located, beneath the fence line on the north side of Willow Brook, approximately 150 feet west of monitoring well WT-MW-41. The

washout has caused an approximately three foot gap between the bottom of the fence and the ground.

<u>Corrective Action:</u> Document existing conditions with measurements and photos and continue to monitor the area.



# United Technologies/Pratt & Whitney Post Remediation Maintenance and Monitoring Program Willow Brook and Willow Brook Pond

	Inspector: Hoofles and MAN Reviewed By: Robin McKinhe	O ale Zule	wet	
Weather Conditions: Kainy	Inspector: HOUTHUI WIMM	LUV CUITA	MI	
Inspection Date:	Reviewed By: Robin McKinhe	4		
Inspection Time: 4:30		1		
		Lacon	TAID/	POOR
INSPECTION POINT	DESCRIPTION	GOOD	FAIR	POOR
Signs of erosion	Check for gullies of more than 2 inches in depth.			
2) Signs of settling	Look for ponding and for settling of soil of more than		X	
-/-0	3 inches over a 5 sq. foot area.		0	-
3) Loss of vegetative cover	Check for loss of vegetation cover in any area greater than 5 square feet.	X	-	
4) Undesirable growth	Check for growth that is in excess of 1/2 inch in			1
4) Oldeshable glown	diameter (woody vegetation) and taller than 2 feet.			0
5) Signs of ponding and run on	Look for areas of more than 5 square feet of standing		1	
of bigus of politicing and the	water or areas where surface water is running onto cap.		9	
6) Condition of fencing and	Check perimeter fence to make sure it is not damaged	11		
gates	(no holes greater than 4-inches in diameter), gates are	X		
5	operable, and locks are in place.	0		
7) Condition of rip-rap in	Observe entire length of stream channel. Verify that	1		
Willow Brook stream channel	rip-rap has not been displaced.	0		
8) Condition of stone layer in	Perform probing of bottom of Willow Brook Ponds at			
Willow Brook	5 locations in upper pond and 15 locations within			1
	lower pond. Verify refusal on stone layer at all		0	
	locations.			
9) Burrowing animals	Verify no holes larger than 2 inches in diameter in	1		
	cap.	X		
<ol><li>Monitoring well network</li></ol>	Check concrete collar protective casing, locks, legible		1	1
	well identification.		0	-
	1.Condition of lock	1		
	2.Visible ID of wells	0.1		X
	3.Ponding or infiltration of surface water	1000	- X	
ži	4.Condition of concrete collar		X	
	5.Condition of steel casing		X	
Report all deficiencies to the d	esignated representative of Pratt & Whitney			- Comment
	ve measures taken, and the date corrective measures were	e complete	d:	
^				
1) See attached	report			
Corrective Action:				
2)				
Corrective Action:				
3)				
· Corrective Action:				
4)			Name of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last of the last o	

## Willow Brook & Willow Pond Inspection Report (inspection conducted September 11, 2009)

An inspection of the Willow Pond engineered cap was completed by LEA personnel on September 11, 2009. The following is a list of maintenance issues identified during the inspection, along with recommended corrective actions.

1.) Areas of minor erosion were observed in several areas along the bank of the Lower Willow Brook Pond (see attached figure).

Corrective Action: Repair with rip rap.

2.) The timber retaining wall forming the eastern side of the man-made dam is still in need of repair. Many of the timbers comprising the wall are severely rotted and the bank behind the wall has been washed out in a few locations.

<u>Corrective Action:</u> Repair or replace retaining wall.

3.) The beaver dam previously identified in the wetland area, downstream of the man-made dam is still intact and has bushes growing on it. Signs of beavers were noted along the northern portion of Willow Brook Pond, as trees had been gnawed.

<u>Corrective Action:</u> Set up beaver traps and transport any beavers caught off-site.

